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26 March 1985

# Worldwide Report

TELECOMMUNICATIONS POLICY,  
RESEARCH AND DEVELOPMENT

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26 March 1985

WORLDWIDE REPORT  
TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

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JAPAN

#### GOVERNMENT PLANS NATIONWIDE COMPUTER NETWORK

OWI00618 Tokyo KYODO in English 0543 GMT 10 Mar 85

[Text] Tokyo, 10 Mar (KYODO)--Construction of a nationwide government computer-to-computer communications network may soon get beyond the drawing board.

Under present planning, an optical fiber communications network will link data bases in ministries and agencies as well as their regional offices across the country.

The plan, advocated by the Management and Coordination Agency, is aimed at consolidating the government's computer data services and making them faster, cheaper, more efficient and more reliable, officials said.

If the plan goes through, the government can cut communications expenses in half and allow participants at cabinet meetings, for example, to retrieve needed information quickly, they said.

The government's communications expenses now amount to more than 10 billion yen (38 million dollars) a year.

At present, more than 400 large computer systems are in operation at government offices and the number of computer software data bases stands at 68.

The systems are now all independent from each other, running on the basis of software developed by each using ministry or agency, except those shared by the Ministry of International Trade and Industry and the Economic Planning Agency.

As an initial undertaking, the government is moving to have a joint communications line between Tokyo and Osaka leased from the Nippon Telegraph and Telephone Public Corporation and made available for government offices in fiscal 1985, beginning next month.

The optical fiber-based service can transmit information nearly 150 times as fast as the conventional telecommunications lines.

CSO: 5500/4514

MALAYSIA

AUTOMATIC RADIO TELEPHONE SYSTEM TO LINK NATION

Kuala Lumpur BUSINESS TIMES in English 16 Jan 85 p 24

/Article by Vong Nyam Ming/

/Text/

MALAYSIA yesterday launched a revolutionary telecommunications system that will bring the telephone to the remotest rural community.

The \$54 million Automatic Telephone Using Radio (Atur) system, or cellular radio, combines the latest in computerised call switching and radio transmission to give full mobility to telecommunications.

In Malaysia's case, Telecoms will be using the system as an alternative for rural communities that have been too remote to be connected by conventional telephone lines.

Coin-operated public phones based on the Atur system will be set up to service rural communities, Energy, Posts and Telecommunications Minister Datuk Leo Moglie said at the launching of Atur at Telecoms headquarters yesterday.

"We are the first in the world to set up a cellular radio system combining mobile and stationary sets but we feel it's worth it because it will give great benefits to villages that are too far away to be connected by wire," he said.

"Atur is an independent network with its own exchanges and radio base stations and this is how we can give telecommunications to previously inaccessible areas.

"We've had the help of the International Telecommunications Union (ITU) to set up the combination of stationary and mobile subscribers. By October 1985, the system will be available throughout Malaysia.

"All mobile radio subscribers will be automatically given international direct dial (ISD) access. If they don't want ISD, they'll have to apply to have it taken away," the minister said.

CSO: 5500/4318

PEOPLE'S REPUBLIC OF CHINA

NEW MODULATION SUMMATOR DESCRIBED

Beijing DIANZI KEXUE XUEKAN [JOURNAL OF ELECTRONICS] in Chinese Vol 7 No 1, Jan 85 p 64

[Article by Ma Derong [7456 1795 2837] and Yang Yuming [2799 3768 2494], both of Southwest China Research Institute of Electronic Technology: "A New Modulation Summator with an Active Inductive Variable Load"]

[Summary] Spreading band with negative feedback is a valid method that is presently widely used at home and abroad. From developing the modulation summator of a microwave phase modulator, it is found that the modulation summator presented in this paper seems to be another valid method of spreading band. The gain-band product of the latter is much larger than that of the former.

The new modulation summator described has a much wider band, higher non-distorted output voltage and better rejection capability for combined-wave than does the Goddard tracking system developed by the Motorola Company. Its characteristics are analyzed in detail with the flow-graph. A series of formulas are derived. It is found that the theoretical analysis agrees well with the experimental curve. Its circuits are very simple and work stably within the temperature range of  $-40^{\circ}\text{C}$  -  $+85^{\circ}\text{C}$ .

9717  
CSO: 5500/4188

PEOPLE'S REPUBLIC OF CHINA

'SHANGHAI TYPE' CROSSBAR URBAN TELEPHONE EXCHANGE

Beijing DIANXIN JISHU [TELECOMMUNICATIONS TECHNOLOGY] in Chinese No 9, 1984  
pp 19-20, No 10, 1984 pp 34-35

[Article by Gu Jiahong [7357 0857 1347]: "'Shanghai Type' Crossbar Urban Telephone Exchange"]

[Text] Crossbar telephone exchanges are widely used in China. In order to match the actual urban telephone situation in Shanghai, the Shanghai Telephone Bureau developed and manufactured the "Shanghai Type" crossbar urban telephone exchange.

The major technical characteristics of the "Shanghai Type" Crossbar Telephone Exchange are briefly introduced in the following:

1. The "Shanghai Type" exchange is suited for the terminal bureau, branch bureaus or switching bureaus in large and medium-sized cities. The most economic capacity is 10,000 gates. Several 10,000 gate units may be installed in the same bureau to form a large bureau with more than 10,000 gates. It may also be used in medium and small cities where single bureau or multiple bureau circuits are used. However, it is more appropriate for more than 2,000 gates. This exchange may be applied to a city telephone network with 4, 5, 6 or 7 digits. Furthermore, it can facilitate the switch over as the number of digits increases when the circuits are upgraded.
2. In a 7 digit network, the maximum capacity is 4 million gates, i.e., 400 10,000 gate units. The maximum outbound direction is 64. Furthermore, it has the overspill detour capability. When transmission attenuation distribution permits, the number of urban connections of the exchange is unlimited.
3. It can be directly linked to the type HJ-921 exchange. After adding matching equipment, it can be matched with various step-by-step, rotary and manual exchanges.
4. It is compatible with small user exchanges. When connected to small user exchanges, a maximum of 8 users can be connected per hundred numbers. They are classified as type A (not more than 10 trunk lines) and type B (not more than 39 trunk lines). When connected to a type C small exchange,

the maximum utilization rate of the trunk line is 60. Furthermore, it is possible to expand the lines by category.

5. It is capable of connecting long distance calls automatically, semi-automatically, or manually according to specified codes. International calls may be connected through special relays or urban telephone exchanges.

6. It is capable of counting the number of local calls. For special businesses, we may not count the number of calls or we may count by the zones using a compound formula. To coordinate the automation of suburban telephones, the urban users will be charged by a compound zoned formula when calling the suburban counties. The charge problem may also be solved by categorizing the calling party as "authorized" and "unauthorized" users.

7. The user lines have a special call-out capability to jump out of busy small exchanges and public telephones in order to reduce the load on the equipment and to increase the connecting rate.

8. In the aspect of recovery control: the ordinary urban users are connected without any mutual control. It can also be conveniently changed to active control. When necessary, a small number of users can be installed with special lines to change to passive control in order to track down the calling party. Active and passive control methods can be used by various special businesses based on their needs.

9. In addition to connecting the terminal equipment of a "Shanghai Type" exchange to user telephones and small user exchanges, it can also be connected to technically compatible low speed data transmission equipment and single channel facsimile machine.

10. In emergency situations, ordinary users can be conveniently cut off to ensure that important calls go through without hindering incoming calls and ongoing important calls.

11. Various designators have important checking capability. When a repeated connection is made, the newly connected user will listen to a busy signal and the original connection is not affected. A special double testing method is used in the C circuit of the designation of the called user. The potential difference between line C and a reference potential is amplified and measured in order to ensure the accuracy in testing C line.

12. When a user changes his number or removes and relocates the telephone, the exchange has the capability to provide the proper service and to automatically send a message.

13. The exchange can send a signal to the calling party in order to develop coin public telephones as well as to meet the need in an automatic billing small exchange.

14. Important common devices, such as designators, bell current generators,

intermittent signal generators and multi-frequency oscillators, are working in a cooperative (e.g., the selective designator), reserve (e.g., the voice current uses a double back-up system with a back-up frame) or parallel (e.g., the user designator) mode to ensure safe operation. In order to improve the reliability of the low voltage connection in the electronic circuit, wet contact elements were added.

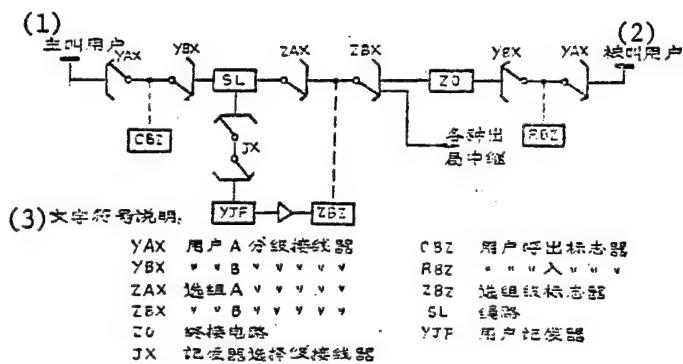


Figure 1.

1. Calling party

Z0 Terminal circuit

2. Called party

JX Counter circuit

3. Symbols

CBZ User calling out designator

YAX User A connector

RBZ User calling in designator

YBX User B connector

ZBZ Selector designator

ZAX Selector A connector

SL Line circuit

ZBX Selector B connector

YJF User counter

15. The capacity of the power supply was enlarged. Only one frame is required for an office with less than 6,000 lines and two frames are required for 10,000 lines. This arrangement not only saves installation space but also facilitates maintenance.

16. Open jacks are installed for the output of important current supplies for voice, ring and multi-frequency signal. Each frame is also equipped with testing and circuit breaking devices. When an important signal malfunctions, we can quickly determine and locate the disorder, especially in case of grounding or line crossing. This will greatly reduce the repair time and limit the affected area.

17. Based on the system that the users are accustomed to in the Shanghai area, in addition to the standard sound signal specified by the Ministry, a 4 short 1 long 450 unassigned number signal and 400 Hz modulated 25 Hz ring are added. There is also a 800-1000 Hz long distance beep.

In the following, the relay method and major characteristics of the "Shanghai" crossbar exchange are briefly discussed:

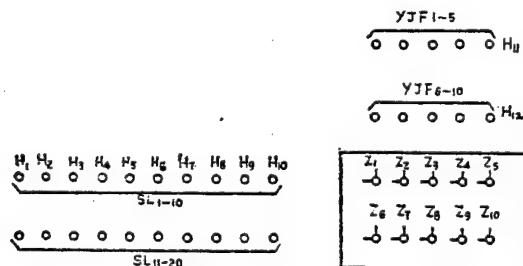
Figure 1 shows the relay method of the "Shanghai" crossbar exchange. For simplicity, the bureau linkage system, test and maintenance equipment and long distance connection equipment are omitted. To save space, only the following major characteristics are explained briefly.

1. Using the End User Group Method. From Figure 1 we can see that the YBX and YAX back to back connection method was used for end users. 180 points of the H5-H10 lines in the YBX circuit for each thousand users are connected into the terminating circuit (Z0) of the key circuit. There are 120 points in the H1-H4 line connected to SL. It means that the actual utilization of SL is 120. Depending on the volume of the business generated by the thousand users, 120, 140 or 160 SL can be assigned. When the number of SL exceeds 120, the YBX of the first 500 users and the YBX of the latter 500 must be connected. It is already prepared in the YBX frame. Different cables are installed in it depending on the need.

2. Terminal Circuit (Z0). The terminal circuit has two primary functions: one is to indicate to the key circuit whether it is idle or busy after YAX is connected back to back to YBX. The other is to ring and intercept the bell. In certain exchanges, bell action is executed by the SL or relay. Generally, it is more reasonable for the SL to execute this function for a single bureau or small urban network. In a large system, the total number of SL and various relay circuits is much larger than that of terminal circuit. Therefore, the bell function is located at the terminal circuit. Although the number of relays in the circuit will have to be increased, however, it is not necessarily uneconomical. Furthermore, separation of the bell function from the SL can overcome the interruption caused by false ringing of the bell between bureaus. It is also beneficial to the frame of the SL.

3. Sender Selector (JX). In a large urban telephone network, especially a multi-switching network, the sender is occupied for a long time. The sender is a high cost, complicated piece of equipment. It is more economic to use a large group connection method. In the "Shanghai" exchange, various senders are connected by a 20-10-20 selector, as shown in Figure 2. The selector replaces the conventional 10:3 exchange circuit in order to expand the utilization of the senders. The number of senders are flexibly assigned to improve relaying efficiency.

Figure 2.



4. User Checking Circuit. This circuit is separately installed on the YAX frame. Furthermore, a redundant shared relay in the checking circuit to ensure the safe communication for the one hundred number set. This is to prevent the user from abnormally trigger a call signal (such as dialing before the dial tone). It minimizes the useless action to reduce the load on the call indicator.

5. User Indicator. The user indicator in the "Shanghai" exchange is not separated into the first 500 and last 500 users in a one thousand unit set. Two call-in and call-out indicators are used to control ten 100 number frames in parallel. A true utilization of 2 is reached. To some extent, it is beneficial to the users. In addition, the same type of call-in and call-out indicators are installed in the same frame to minimize the connecting cable.

6. Selector Set. The "Shanghai" exchange uses two different selectors to adapt to different needs. One is the 120-150-190 set which is suited for a large urban network. In addition to ten 1,000 number sets, it can be connected in 54 outbound directions. The other is the 80-120-600 set which is suited for a terminal bureau between a small and medium city with a large urban network. The former uses six ZABX frames while the latter uses four. The ZABX frames are identical for both sets.

7. Selector Indicator. In the design of the selector indicator, the decoding capability is combined into indicator selection. The decoder frame is eliminated. Not only the cost of equipment is saved but also the circuit needs not to be altered when the phone number is lengthened. Only the jumper on the board has to be changed. It is easy to expand and maintain. In the design of the frame, two selectors are installed on a frame which not only reduces the frames but also converses the cables between two selectors.

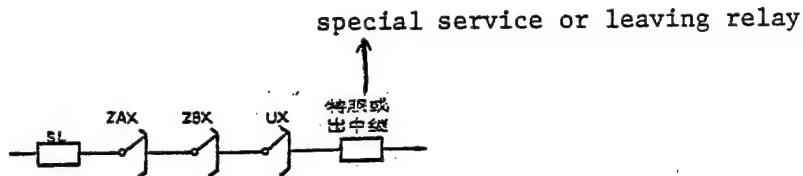
8. Auxiliary Selector UX. Three junction boxes are used to form a dedicated UX set for 30 incoming and 30 outgoing lines (see Figure 3 for the relay mechanism). It can be decomposed into a maximum of 9 directions. After UX is installed, the utilization range of the selector output is improved by the relay F which divides the lines up into small beams. Because even when the relay line behind UX is reduced to 1 or 2 the 30 B class key circuits of the selector can still be fully utilized, their relaying efficiency is approaching the efficiency when the entire line utilization is apparently lost. By connecting a small relay circuit on UX, the problem of high loss due to key circuit closure can be solved. The number of UX required depends on the number of small relays. Each station with 10,000 units may install 2-4 UX frames. In order to maintain good quality communications, "Shanghai" exchange is also equipped with relatively comprehensive test and maintenance equipment.

1. Routine Testing. In the "Shanghai" exchange, circuit to circuit connection and testing is not used. Each circuit is tested independently. Thus, the tested equipment can be more rigorously examined. It also facilitates the maintenance personnel in testing and repair. Each equipment can be tested by category and not be limited by circuits not switched on. Routinely testing

equipment in the "Shanghai" exchange includes automatic equipment such as the sender testing circuit, code transmission and receiving testing circuit and user circuit testing circuit, as well as semi-automatic ones such as various key line testing circuits, SL and relay testing circuits. Most of the problems detected can be printed automatically.

2. Automatic Recording of Disorders and Quality Analysis Capability: Each indicator has its own automatic disorder recorder. The BD-055 teletype is the recording equipment. It was used in Shanghai beginning in 1974. Years of experience proved that it is a powerful way to track down breakdowns in the circuit. A continuous quality interface was designed for each indicator to accumulate data for analysis.

Figure 3.



3. Maintaining Capability During Breakdown. The sendors and other circuits can maintain their capability during a breakdown. When the first call cannot be connected in time, a warning signal will be given. With the exception of the indicator, other circuits are maintained in their original states to allow the repair man to locate the malfunction. When a malfunction occurs, the calling party sends a busy signal through the user circuit. The user may dial again after hanging up.

4. Improving Performance of Measuring Stations. A new "Shanghai" type measuring station was designed by gathering the capabilities of various measuring stations used in Shanghai together with the special need of the Shanghai crossbar exchange. The measuring station can be connected to any user through the keyboard. It is capable of distinguishing circuits inside and outside the bureau. It can also be connected to various testing circuits to realize communications within a station as well as between neighboring stations. If necessary, it has the capability to perform telemetry.

5. Observation and Control Desk. A service observation and monitoring desk (also a separate control room) may be installed in the building to perform quality observation, users education, equipment monitoring, automatic survey, night time complaints and communications.

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CSO: 5500/4174

PHILIPPINES

PHILIPPINES GETS SATELLITE USE EXTENSION; TELEVISION EXCLUDED

HK270326 Manila BUSINESS DAY in English 26 Feb 85 p 11

[Text] Domestic Satellite Philippines, Inc. may use Jakarta's Palapa Satellite for three more months, but domestic satellite transmissions for broadcast are no longer allowed.

Ceferino Carreon, commissioner of the National Telecommunications Commission, has told Transport and Communications Minister Jose P. Dans Jr., that Perumtel, Indonesia's telecommunications giant, has agreed to extend Domsat's use of the Palapa satellite from Feb. 1, 1985 to April 30, 1985. Domsat's lease contract with Perumtel expired last Jan. 31.

Carreon said Domsat paid \$93,750 in advance as rental for the corresponding extension period.

Domsat will continue use of the Palapa satellite only for domestic satellite transmissions for phone calls, telexes and telegraphs.

Domsat in effect has paid only for the use of the lower half of "transponder 9," composed of about 128 satellite circuits used to send domestic record messages (telex and telegraph) and voice.

A source in telecommunication estimated that 60 percent of the transponder 9 is being leased by record carriers such as the Radio Communications of the Philippines, Inc., Philippine Telegraph and Telephone Corp., and Philippine Long Distance Telephone Co. "This is the only viable part of its operations," the source said.

The use of transponder 3, for television, was suspended because Radio Philippines Network (RPN), the sole user of this facility, could not afford to pay the full transponder rental of \$62,500 per month, Carreon said.

"Just so as not to interrupt telecasts, if RPN could advance such rental, Domsat would not charge provisionally for its other services," Carreon told Dans. "But RPN stated it could not bear any increase in costs. And Domsat is not in a position to further absorb the monthly losses of P500,000, more or less, which it has suffered in the past to accommodate television."

Carreon said Domsat has encountered great difficulties in getting RPN 9 to pay its satellite bills in the past few years. To eliminate the financial problem, Domsat's board agreed to suspend transmission for broadcast last Jan. 31, he added.

However, this does not mean Domsat itself cannot use transponder 3 occasionally for television. Carreon told Dans that Perumtel assured Domsat that transponder 3 can be reactivated for television within 48 hours on request.

Carreon said Perumtel agreed to the extension for use of domestic satellite for sending recorded message and voice so Domsat would have "more time to make a decision on several options on how to ensure the continuity of its service."

Domsat needs time to settle its \$4,005,165.65 total obligations to Perumtel as of Jan. 31, 1985.

Payment of this amount is a precondition to a new lease agreement after April 30, 1985.

CSO: 5500/4319

HUNGARY

NEW DATA COMMUNICATION LINKUP WITH USSR REPORTED

LD042118 Budapest MTI in English 1741 GMT 4 Mar 85

[Text] Budapest, March 4 (MTI) — A remote data communication channel connecting the data processing centres of the Budapest-based Research Institute for Electric Power and the Research Institute for Automated Information and System Technology of the Soviet Union (VNIIPAS) was inaugurated in Budapest on Monday by Minister of Industry Laszlo Kopolyi.

Through the channel the Hungarian side may establish contacts with 15 major computer centres in the Soviet Union and data banks in other socialist and several capitalist countries.

At the inauguration ceremony Laszlo Kopolyi spoke with appreciation of the successful cooperation of Hungarian and Soviet experts in the establishment of the channel. He said that the information available through the Soviet partner offers an opportunity for the Hungarian national economy to get more intensively involved in international division of labour.

Speaking of the work of his institute, VNIIPAS Director Oleg Smirnov said that the Soviet Union was going to extend its computerized information service, enlarge its data banks and widen its data communication relations with the socialist and capitalist countries in the coming years.

CSO: 2020/75

ARGENTINA

FRG FIRM PROPOSES DOMESTIC SATELLITE COMMUNICATIONS PROGRAM

Buenos Aires AEROESPACIO in Spanish Jan-Feb 85 No 443 pp 28-30

[Article by Nicolas Caviglia; passages enclosed in slantlines printed in boldface]

[Text] Dornier System, a subsidiary of Dornier GmbH, recently introduced its Domestic Communications Satellite (DOMSAT) here. The Friedrischshafen company of the Federal République of Germany has lent this program its valuable experience, accumulated throughout the development of various projects in Europe. In order to carry out this program, a team of specialists headed by Dr Ulke, director of Dornier System, came to Argentina. The other members of the team are Dr Hollstein, Mr Ockert (in charge of the space segment), Dr Bommas (the ground segment) and Dr Hofmann (economic and organizational aspects).

The idea of proposing a domestic commmunications system for Argentina is based primarily on the possibility of undertaking an effective space technology transfer, enabling our industry to contribute actively to the development of various parts of the space- and ground segments (see Figures 1 and 2). This would undoubtedly have to be considered the first step in a long-term space program for Argentina. The other alternative would be to buy a system abroad, which is a short-term solution that would entail a lower cost for the installation of a similar system, but would not lead to national space independence.

DOMSAT

This project consists of two telecommunications satellites that would be placed in geosynchronous orbit (35,000 kms above the equator) between 65 and 75 degrees longitude west. These vehicles may be launched simultaneously with a single rocket launch vehicle, and their antennae would cover our national territory, though they would also be capable of extending their coverage to the antarctic zone. The useful life of each satellite would be an estimated 7 to 10 years. The general configuration will be of the DFS-Kopernikus type, and there would be 3-axis stabilization to ensure the proper aiming of the antennae toward our territory. The number of transponders will depend on the traffic; in a medium-level service like this the number tends to range from 24 to 36. This number will determine the power of the vehicles, which will range

from 1,600 to 2,450 watts, and the weight in orbit, which will be around 1,300 kilograms.

The general applications of the DOMSAT will be the following: /Telephony, / with fixed connection service among areas of high population density and among remote areas of the country; /data transmission, / with high- and low-speed services (for example, the exchange of data between computers); /television, / direct transmission for local and regional communities, with the capacity for exchanging and distributing programs (RTV); and /others, / including experimental, scientific, and military applications, and possibly leasing to neighboring countries.

#### Selection of Launcher

In choosing the system that will transport the vehicles to their geosynchronous orbit, cost and reliability factors are not the only ones to be taken into consideration. Other factors are the timing of the launch and the availability of the rocket launch vehicle on a given date. This is due to the great demand by the countries that want to send vehicles into space, for which they must make reservations several years in advance. It is clear that in view of the currently available transport systems, the Ariane one-time-only rocket of the European Space Agency (ESA) or the U.S. reusable orbital shuttle (STS) will be the two options.

If the first is chosen, considering the time it will take to develop the satellites, the Ariane IV will already be operating, with twice the capacity of the current Ariane I/II. The new vehicle can transport a satellite with a launch weight of 4,200 kg, or two with launch weights of 1,900 kg each. If the STS is chosen, it can carry the satellite to a low orbit (300-400 km high), and from there propel it to a geosynchronous orbit using a PAM or IUS rocket, which have already been successfully tested.

#### Land Segment

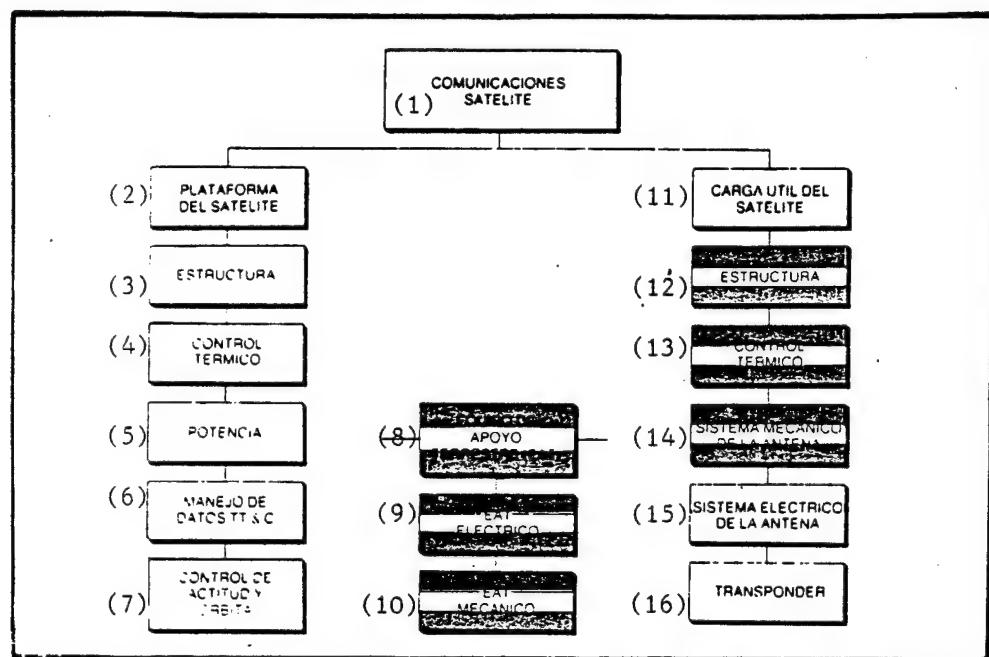
The DOMSAT project calls for a series of ground antennae that will be built according to the requirements of a specific schedule. They entail two 15-meter paraboloids for the control of the network, and another paraboloid of the same size to monitor the satellite's position; between 10 and 20 seven- to ten-meter principal antennae for television and telephone broadcasting and reception and data transmittal; between 30 and 50 medium-sized six-meter parabolic antennae for retransmission; between 100 and 150 five-meter antennae for retransmission in rural zones; and 4.5-meter mobile stations, whose number has not yet been determined, to cover the antarctic region if necessary.

It is important to note that Dornier is one of the most important suppliers of communications satellite ground stations. The German firm has delivered "turnkey" equipment for the Symphonie, OTS, ECS and Telecom satellites, and all indications are that it is in this segment that participation by Argentine industries will be most feasible.

## Conclusions

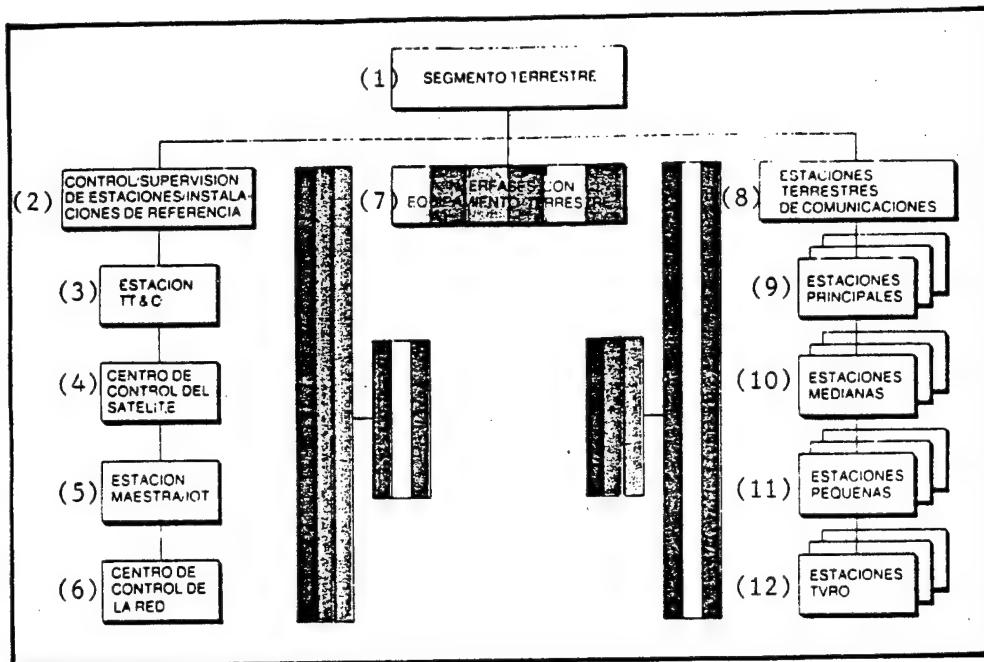
A preliminary calculation revealed that the DOMSAT system will cost US \$300 million, in addition to launch costs of US \$60 to 120 million and insurance costs. These figures are provisional, since the final total will depend on several variables, including the type of satellite selected and its features, its reliability, the characteristics of the ground network, the ability to lease services to third countries, and complementary services (military communications, repetition of meteorological impulses, etc.).

The management of the project will be organized in the manner shown in Figure 3. The integration and testing phases will take place in FRG, given the facilities required. The management of the work on the satellite itself will also take place in FRG, but the ground segment will be managed in Argentina, since these tasks are very closely linked to the existing infrastructure and because most of the elements can be manufactured by local industries.



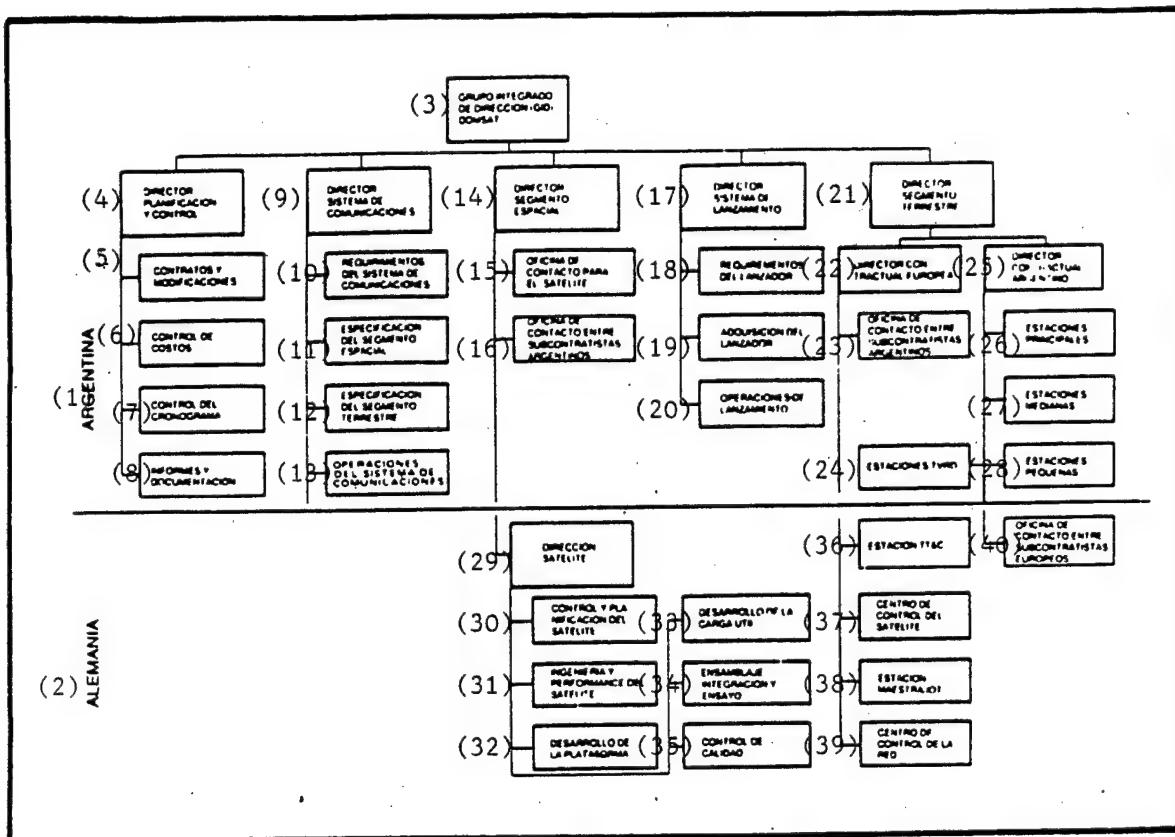
Key:

1. Communications Satellite	9. Electrical EAT
2. Satellite Platform	10. Mechanical EAT
3. Structure	11. Satellite Payload
4. Thermal Control	12. Structure
5. Power	13. Thermal Control
6. TT&C Data Management	14. Antenna Mechanical System
7. Attitude and Orbit Control	15. Antenna Electrical System
8. Ground Support Equipment (EAT)	16. Transponder



Key:

1. Ground Segment
2. Control/Supervision of Reference Facilities/Stations
3. TT&C Station
4. Satellite Control Center
5. Master Station/IOT
6. Network Control Center
7. Interfaces with Ground Equipment
8. Ground Communications Stations
9. Main Stations
10. Medium Stations
11. Small Stations
12. TVRO Stations



Key:

1. Argentina	21. Ground Segment Director
2. Germany	22. European Contract Director
3. Integrated Administration Group (GID) DOMSAT	23. Argentine Subcontractor Contact Office
4. Planning & Control Director	24. TVRO Stations
5. Contracts & Modifications	25. Argentine Contract Director
6. Cost Control	26. Main Stations
7. Schedule Control	27. Medium Stations
8. Reports & Documentation	28. Small Stations
9. Comm. System Director	29. Satellite Administration
10. Comm. System Requirements	30. Satellite Control & Planning
11. Space Segment Specification	31. Satellite Engineering & Performance
12. Ground Segment Specification	32. Platform Development
13. Comm. System Operations	33. Payload Development
14. Space Segment Director	34. Assembly, Integration & Testing
15. Satellite Contact Office	35. Quality Control
16. Argentine Subcontractor Contact Office	36. TT&C Station
17. Launch System Director	37. Satellite Control Center
18. Launcher Requirements	38. Master Station IOT
19. Launcher Acquisition	39. Network Control Center
20. Launching Operations	40. European Subcontractor Contact Office

8926

CSO: 5500/2044

ARGENTINA

BRIEFS

NATIONAL MICROWAVE NETWORK SERVICE--Buenos Aires, 4 Mar (TELAM)--The official broadcasting service has begun its transmissions to the whole country through the microwave network of the National Telecommunications Company (ENTEL), a measure that will allow all the affiliates of Radio Nacional to receive instant information, sports programs, and any other type of program. This information was released today by the Communications Secretariat. The Press Department of this Secretariat also released statements that were made on this topic by Nestor Rodriguez Cross, National Broadcasting director, from Tierra del Fuego. The official stated that we are thus achieving territorial integration with the possibility of the LRA's [call sign of Buenos Aires Radio Nacional and affiliates] being able to cover the whole country in optimum technical conditions for their transmissions and the network also has a return channel to the capital so that the country can be informed of what is happening in each one of its regions. [Excerpt] [Buenos Aires TELAM in Spanish 1921 GMT 4 Mar 85 PY]

CSO: 5500/2050

BRAZIL

DRAFT OF NATIONAL INFORMATICS PLAN CONCLUDED; REACTION

Ready for Discussion

Sao Paulo O ESTADO DE SAO PAULO in Portuguese 22 Jan 85 p 32

[Text] Brasilia--The draft of the National Informatics Plan has been completed and will be brought up for discussion at the first meeting of the National Informatics Council the installation of which was scheduled for this month but was postponed until February due to the lack of time to comply with a number of formalities, according to the explanation of the secretary of the Special Secretariat for Informatics (SEI), Edson Dytz. The plan envisages among other things: acceleration of the automation of the Credit Protection Service (SPC); establishment of the National Interbank Network; creation of a Special Micrography Commission; and replacement of the Computerization of Brazilian Municipalities Program at an estimated cost of 1.056 million National Treasury Bonds (ORTN's) (about 24 billion cruzeiros).

Every sector involved in the use and production of informatics was listed, each one being analyzed on the basis of its history, the current situation and the prospects for the area, followed by the establishment of short, medium and long-term goals.

For commercial automation, for example, the draft identifies the need to integrate the activity into computerized networks. However, this implies a political decision on the standardization of interfaces and communications protocols compatible with international standards. It also provides for the lists of "negative" credit card customers to be consulted via the Terminal Exchange Network (TEF). According to the draft-plan, automation of retail sales can only be done after a national effort for the coding of products by the supplier himself and on the original package so as to permit the optical reading of the prices.

In that sector, the plan stresses the need for the SPC to supply complete customer credit lists, thus reducing the time spent filling credit files when making installment credit transactions.

### Micrography

In addition to planning the creation of a Special Micrography Commission (the area that deals with micrographed information), the document proposes the drafting of new legislation for the sector.

To overcome the impact of automation in the office, the plan refers to the need to recycle employees whose jobs may be affected and to give priority to the reemployment of those who may be dismissed as the result of technological innovations.

For the automation of small branch banks, it proposes incentives for the manufacture of the necessary modular equipment by national companies. It also suggests the creation of "procedures to control the action of the multinationals that manufacture equipment for the automation of services."

In the case of the public sector, the plan calls for fitting the available resources to the existing equipment, programs and services. It is the intention of the drafters of the plan to increase the productivity of the public sector through the definitive integration of computerized systems. In addition, they plan to replace imported products by nationally manufactured ones.

They also intend to create the Computerization of Brazilian Municipalities Program based on the concept that, in addition to increasing the reliability of the information collected, that process will contribute to eliminating the duplication of effort in that area in terms of activity at the state and federal levels.

The plan creates a Computerization of Brazilian Society Program (sectoral) involving the following areas: education, culture and sport, labor, justice, housing, industry, commerce and services, public safety and tourism. The organization of that program was estimated at 20,465 ORTN's, (about 280 million cruzeiros).

In the military area, the draft-plan shows the need for a detailed monitoring of the qualification of the national military industry as regards computerized systems. It also suggests a greater interchange between the informatics sector and the armed forces with a view to their strategic interests.

The plan creates a special commission for the protection of data and the drafting of the basic text of a Brazilian regulation governing that concern.

The preliminary text speaks of the regulation of the flow of data across borders based on the informatics law.

The document calls for the rigid and regulated control of the importation of software. It also asks that the public sector at all levels give preference to national software.

Finally, the plan calls for the approval and implementation of a national microelectronics policy.

Draft Well Received

Sao Paulo O ESTADO DE SAO PAULO in Portuguese 23 Jan 85 p 26

[Text] The National Informatics Plan, which will be discussed at the first meeting of the National Informatics and Automation Council (CONIN) in February, pleased businessmen in the sector as well as the triple list of those who will represent the various organizations in that agency. The vice president of the State Council on Industrial, Commercial and Agroindustrial Policy (COINCO), Paulo Feldmman, considered the draft quite encompassing, broaching "crucial matters that have been relegated over the years," such as the social aspect.

Feldmman pointed out that there has never been a use of informatics in the social context in Brazil but always in the areas of tax collection and the "administration of the bureaucracy." He stressed that the process of computerization generated by public agencies as is proposed in the draft-plan is one of the great roles of the government.

The vice president of COINCO also praised the concern about the impact of the automation of society contained in the draft. At the same time, he considered all the individuals named to the COINCO as highly competent, "which is going to compel the discussion of informatics to be conducted in a forum of the highest caliber."

The president of the Society of Users of Computers and Subsidiary Systems (SUCESU), Hrnrique Costabile, declared that the National Informatics Plan should be discussed with the society through its representative organizations before being implemented. Costabile pointed out that it will not be possible to request a case hearing at the CONIN meetings and stressed the importance of adopting prior discussion as a working system.

According to Costabile, since the draft encourages informatics services supported by data banks, "the time is right to do something to defend the privacy of the citizen and to create a commission for that purpose." The president of SUCESU-SP also spoke about the need to create protocol standards in a network for the transfer of national funds, pointing out that the draft refers to the establishment of an interbank network. He predicted that the encouragement of telecommunications networks as a means of utilizing distributed informatics will speed up business transactions and public services.

GATT

The U.S. Government's consultation of the General Agreement on Tariffs and Trade (GATT) last week to find out if the Brazil's reserved market does not violate international free trade rules had already been expected by the Brazilian Government since last year. In Brasilia, Brazilian authorities are not at all concerned about the matter because before adopting the reserve, the SEI consulted the agency in Geneva and obtained its approval for drafting the law.

According to Paulo Feldmman, the U.S. Government's attitude "is only political, only meant to frighten." He declared that the real fear of the United States is that Brazil's example may be followed by other Third World countries. Costabile pointed out that the reserved market law has already been analyzed in many international forums and he attributed the consultation of the GATT to the U.S. interest in the Brazilian market.

8711

CSO: 5500/2036

AFGHANISTAN

TELEVISION BROADCASTING REPORTEDLY EXPANDING

Kabul ANIS in Dari 9 Jan 85 p 1

[Text] Following the victory of the Sawr Revolution and particularly its evolutionary phase, positive transformations have generally taken place in the economic, social and educational fields. One of these changes has been in the public information and enlightenment media through the expansion of radio-television broadcasting in the country, and is specially valuable in the healthy education of our citizens.

As our respected readers are aware television broadcasts have now started in the three provinces of Kandahar, Herat and Nangarhar and preparations are now under way for the start of television broadcasts in three other provinces in the near future. Mohammad Zarrin Karimi, technical deputy in the Ministry of Communications, commented in this connection during an interview with the correspondent of ANIS, saying: Since television affects the lives of the people of a society in a positive and real fashion and shows achievements and backwardness of society through pictures, our revolutionary party and government decided that, in addition to local radio stations, to set up television stations in the country's provinces.

He said: The television projects of Kandahar, Herat and Nangarhar which were started in honor of the 20th founding anniversary of the PDPA were completed before the deadlines. In the near future television broadcasts will start in the provinces of Ghazni, Farah, Badakhshan and Khost Subprovince. The buildings of the television stations in Ghazni and Khost are about ready. These stations will begin work by the end of the year [20 March 1985]. Sixty percent of the construction of the Badakhshan television station has been completed up to now.

The deputy of the Ministry of Communications said in response to a question: The seven television facilities which are under the control of the Ministry of Communications have been purchased from the Soviet Union at a price of 794,000 dollars and 6 million afghani has been spent from the government development budget generally in construction projects and adjustments in the seven provincial television stations.

In response to a question regarding the technical details of the provincial stations he said: The country's provincial television facilities operate on the PAL system. Each facility is capable of broadcasting up to 15 kilometers in color and 25 kilometers in black-and-white. The stations can also broadcast via satellite and directly record and broadcast programs at the stations. Thus these television facilities have receivers and transmitters with a capacity of 100 kilowatts and other equipment and with their 3-meter high antennas can receive programs via satellite.

He added: Parallel with the start of provincial television projects, the necessary technical personnel has been readied for them by the Ministry of Communication. Even so, if a need should arise, Soviet experts are ready to actively cooperate with us regarding technical matters.

The technical deputy of the Ministry of Communication discussed at length the educational and the public awareness values of the public information media and added: Alongside the start of television broadcasting in a number of provinces, the Ministry of Communication has also set up local radio broadcasting facilities in a number of the country's provinces and as far as we gather from border provinces of the country, such radio broadcasts have been enjoyable and play an active role in the enlightenment of our citizens and the publication and promotion of the progressive ideals of the Sawr Revolution.

5854  
CSO: 4665/23

AFGHANISTAN

INSTRUCTION THROUGH TELEVISION EXPANDING

Kabul HAQIQAT-E ENQELAB-E SAWR in Dari 7 Jan 85 p 4

[Text] Recently the first educational program production studio was inaugurated in order to provide our citizens help in the fields of training, health and social affairs.

In providing this information, the supervisor of the television-radio Educational and Training Division gave these details: From the start of the current year [21 March 1984] the educational and training programs of the division have expanded from a half-hour radio program (consisting of educational radio and radio classes for schools) to 6 programs, which is an increase compared to last year. The division also, parallel with educational programs for the public and short literacy programs, is continuing to record programs relating to "brother" nationalities and programs for peasants.

It should be mentioned that in years of 1362 and 1363 [21 March 1983-20 March 1985] 9 radio-television technicians underwent short-term one-month courses in how to handle technical facilities.

They are now working as technicians and are helping familiarize the training-educational radio-television personnel even more in the preparation of vocational programs.

Of course these programs have been started with the cooperation and help of UNICEF in Kabul and the intention is to set up, in the near future, courses aimed at better familiarization of personnel in production, the preparation of radio-television programs, video editing and lighting. He continued: All engineers of this division are taking part in the editing, montage and technical facilities of the division. It was as a result of their efforts that the montage and editing of all technical facilities of the studio were completed and were ready for use in a month.

5854  
CSO: 4665/23

AFGHANISTAN

BRIEFS

TV STATION INAUGURATED--Kabul (BIA)--The television station of Ghazni city equipped with modern appliances was inaugurated during a grand ceremony by General Ghulam Nabi Yusufi, Chief of the South Eastern Zone on Sunday. The station commissioned in accordance with the joint development plan of the State Committee for Radio-TV and Cinematography and Ministry of Communications of the DRA is carrying out its programmes in two parts, two hours daily. The first part of its programme is transmitted through the central TV by the Shamshad Earth Sattelite Unit put by the Soviet Union at the disposal of the DRA. It is relayed to Ghazni in 10th channel which include news, reportages, informative and educative Programmes. The 2nd part of the programmes are transmitted from the archieves at the station which has been copied from the Central TV. This part include political, social, informative and artististic programmes as well as TV films. The working people of Ghazni upheld the attention of the party and revolutionary state for the establishment of TV station in their province. The ceremony was also attended by party and state employees and a number of Ghazni citizens. [Text] [Kabul KABUL NEW TIMES in English 5 Feb 85 p 4]

CSO: 5500/4720

BANGLADESH

#### ERSHAD DISCUSSES POLICY ON NEWS REPORTING

Dhaka THE BANGLADESH OBSERVER in English 30 Jan 85 pp 1, 8

[Text] The President and Chief Martial Law Administrator, Lt. Gen. H. M. Ershad on Tuesday said that there was no room for individual opinion or personal likings and dislikings in the presentation of news objectively and impartially reports BSS.

He said the journalists were described as the "conscience keeper" of a nation and hence responsibility was of utmost importance in the professional role in journalism.

The President was inaugurating the fifth biennial conference of Bangladesh Sangbadik Samity--an organisation of mufassil journalists--at the Shilpakala Academy auditorium in Dhaka.

Attended among others by the DCMLA's--Rear Admiral Sultan Ahmad and Air Vice-Marshal Sultan Mahmud and Ministers, the function was also addressed by the Information Minister, Mr. A. R. Yusuf, the President and the General Secretary of the association Mr. Safiuddin Ahmed and Mr. Gobinda Lal Das.

President Ershad said it was needless to say that journalism devoid of "responsibility" did only impair the image of journalism only.

He expressed the hope that being the conscious and alert section of the society, the people connected with the journalism would work for the establishment of truth and justice. The President said those journalists who were presenting news of the far-flung areas living in townships and villages could make significant contributions in the development of rural Bangladesh which was hubbing with uplift activities for the first time, with the decentralisation of administration and other reforms effected in socio-economic sectors by the present Government.

The President was confident that they would help for building a happy and prosperous new Bangladesh for the posterity by playing a proper welfare-role.

Turning to national elections scheduled for April 6 next, President Ershad said that a great enthusiasm and interest was being noticed in the people for elections. "Inshallah, the elections will be held as announced he said adding:

"you can play an effective role so that the people could exercise their right of franchise judiciously".

The President reiterated his Government's firm belief in the freedom of the Press and said there was no barrier in the free expression of information and opinion in the newspapers of the country. We have set up a rare example in the returning of newspaper to private ownership from Government control, he said adding: We are the first to constitute a Press Commission, recommendations of which are under active consideration of the Government.

In this connection he referred to the formation of Second Wage Board for the journalists and Government's complementary role in its implementation and observed that the recommended wage structures for the stringers were their due. He hoped that all concerned would take required steps in this regard.

Wishing success of the Bangladesh Sangbadik Samity in providing support to the development endeavour of the rural areas, President Ershad said the prospect of national uplift lay in the development of the villages. He said all the programmes of the Government was aimed at the welfare of greater multitude of the population including peasants workers and commonmen.

The President said the nation expected that while performing the responsibility journalists would keep themselves neutral. He told the conference that steps would be taken to form a welfare trust for the mufassil journalists.

Speaking on the occasion, Mr. A. R. Yusuf stressed on the important role of journalists and freedom of journalism in the greater interest of a country and said that with that end in view the present Government had been doing everything possible to develop journalism and ensure a free Press.

The Information Minister hoped that the journalist community considering their conscious role in guiding a nation should keep in mind their responsibility towards the nation while discharging their professional duties.

CSO: 5550/0034

INDIA

## NAVY TO HAVE NEW COMMUNICATIONS SYSTEM IN 1988

Madras THE HINDU in English 19 Feb 85 p 1

[Text]

TIRUNELVELI, Feb. 18.

India will become one of the handful of maritime nations to be able to communicate directly with submarines while under water when the Indian Navy's electronic communication project is completed in 1988.

The Defence Minister, Mr. P. V. Narasimha Rao, today visited South Vijayanarayananam in Tirunelveli district where "Project Skylark" is coming up. The Minister and the Vice-Chief of the Naval Staff, Vice-Admiral K. K. Nayyar, were shown round the project area by the Project Director, Commodore S. K. Chand.

Explaining the features of the Project, Commodore Chand said submarines had now to come to the periscope level to receive messages, making them vulnerable to attack. The idea of a VLF (very low frequency) facility, to obviate the need for submarines to come to surface to receive instructions was considered even 15 years ago. The former Defence Minister (now Vice-President) Mr. R. Venkataraman, laid the foundation for it in January 1984.

Originally import of technology was thought of for the project but the Government decided in 1979 to have it with indigenous technology. Eighty per cent of the project would be indigenous now.

About 3,000 acres have been acquired for the project covering three villages. Out of this 600 acres were given free by the State Government.

Vice Admiral Nayyar told the Defence Minister that a site in Andhra Pradesh was also considered. Factors like availability of a long stretch of flat land, proximity to sea on both sides and the State Government's help tilted the scales in favour of South Vijayanarayananam, he said.

Later speaking to newsmen, Mr. Narasimha Rao expressed happiness that the project was coming up as scheduled and complimented all those involved in this work.

He denied the suggestion that his visit had anything to do with the Sri Lankan situation. The Indian Navy and the Coast Guard were performing their duties well though "they were not fully equipped — we are providing them now everything to strengthen the Coast Guard", he said.

On his arrival at the project site the Minister was received by the District Collector, Mr. V. Ramadoss, and the Superintendent of Police, Mr. P. Pandiyan. Mr. Narasimha Rao later left for Courtallam, a health resort for overnight stay.

INDIA

BRIEFS

ITI EXPORT CREDIT--Bangalore, January 16--Indian Telephone Industries signed an export credit agreement yesterday with Banque Indo-Suez and Grindlaya Bank, which will act in consortium for buyer's credit totalling 84 million French francs equivalent to Rs. 11.1 crores approximately, at the current exchange rate. The credit will carry an interest rate of only 9.5 percent, and will be used by ITI for financing imports of components and manufactured piece-parts to meet part of the first two years' requirement of production in their new factory at Mankapur-Gonda (UP) and Palghat (Kerala). The credit covers the likely price escalation for the purchases. The two banks got the lead-manager mandate after overcoming stiff competition and will associate other banks, including the Paris branch of State Bank of India, in fulfilling the agreement. ITI has also entered into an agreement with Cit Alcatel of France for indigenous manufacture of digital electronic switching equipment in its new unit at Mankapur and at the existing unit at Palghat. This agreement was the result of a bi-lateral understanding between the government's of France and India. The bi-lateral offer makes available soft loans from the French government and credit from French bankers with attractive rates of interest and deferred payment facilities. The Mankapur unit with a rated capacity of 500,000 lines of local exchange equipment and the Palghat unit with a rated capacity of 30,000 lines of digital trunk automatic exchange equipment, are both expected to commence manufacture and effect supplies during 1985-86. /Text/ /Bombay  
THE TIMES OF INDIA in English 17 Feb 85. p 11/

LINK WITH ANTARCTICA--NEW DELHI, Feb. 19--The fourth Indian Antarctica expedition, now on the icy continent, has successfully established a high frequency communication link with the country. Established by the Indian Navy with the help of indigenous equipment, the link will result in considerable saving as the cost of the present satellite link comes to about Rs. 120 a minute, a spokesman of the Department of Ocean Development said here today. The link has been established between India's permanent station in the Antarctica and the control room at the Department. [Text] [Madras THE HINDU in English 20 Feb 85 p 6]

CSO: 5550/0036

SRI LANKA

TELECOMMUNICATION SERVICES TO GO PRIVATE

Colombo SUN in English 14 Feb 85 pp 1, 11

[Article by Kendall Hopman and Dexter Cruez]

[Text] Government yesterday decided to privatise state-run telecommunications services.

The decision was prompted by a unanimous recommendation backed by a five-member Cabinet sub-committee appointed last year.

The five Ministers who presented their report to yesterday's meeting of the Cabinet, said they were unanimous in their view that the telecommunications needs of Sri Lanka could not be adequately served by the present institutional format of a government department and that other methods should be explored for providing an effective and efficient service.

The sub-committee's recommendations were exclusively reported in 'WEEKEND' on February 3.

Official Cabinet spokesman and State Minister Dr. Anandatissa de Alwis told reporters at the weekly briefing that Cabinet decided that worldwide publicity should be given to the proposal to privatise the Department of Telecommunications.

The privatisation of telecommunications services was first recommended by Messrs Cable and Wireless, a British firm commissioned by the Cabinet sub-committee to study the issue.

The firm while recommending a change in the institutional format of the Telecommunications Department suggested as an alternative a joint venture with the participation of the government, the International Finance Corporation and itself, Dr de Alwis said.

The terms suggested by Cable and Wireless were that the Sri Lanka government hold 35 percent of shares in the new organization, the IFC 14 percent, and itself 51 percent. The government, however, would hold the "golden share," giving it the right to overrule the other shareholders under certain circumstances, he added.

Minister de Alwis said this government had decided that "in fairness to all parties concerned, the opportunity to tender for the proposed privatisation should be open to other international organizations who wished to make similar offers."

The sub-committee also recommended that the Cabinet decide what course should be adopted to publicise the government's decision and that government should appoint a committee competent to assess and report on the economic, technical and other aspects of proposals received in response to such publicity.

It was also decided to appoint a committee of officials from the Telecommunications Ministry, the Department of Telecommunications and the Treasury to report on the extent of investment by the government in the Telecommunications Department, the assets and liabilities of the department, its profit and loss position and the growth and expansion of the telecommunication services envisaged in the future.

The Cabinet sub-committee met on four occasions to consider its recommendations on telecommunications.

It comprised Public Administrator Minister Major Montague Jayewickreme (Chairman), Textile Industries Minister Wijayapala Mendis, Posts and Telecommunications Minister D. B. Wijetunge, Fisheries Minister Festus Perera, and Rural Industrial Development Minister S. Thondaman.

CSO: 5500/4717

ETHIOPIA

ETHIOPIA-ITU TALKS ON TELECOMMUNICATIONS AID

EA121608 Addis Ababa Domestic Service in Amharic 0400 GMT 12 Feb 85

[Text] Comrade Fikre-Selassie Wogderess, Workers Party of Ethiopia Central Committee Political Bureau member and deputy chairman of the Council of Ministers, met and held discussions with Mr (Etagh) Butler, secretary general of the International Telecommunications Union [ITU] in his office yesterday. On meeting the secretary general of the Union, Comrade Fikre Selassie discussed the role of strengthened and expanded international telecommunication services in a country's economic development, the assistance of the organization in modernizing telecommunication services, and the replacement of old equipment with modern technological equipment.

In his speech, Comrade Fikre-Selassie said that telecommunications, which is one of the communication sectors used internationally, had not expanded as desired in our country and added that after the eruption of our revolution appropriate attention was given to this development sector and tangible results have been achieved. Comrade Fikre-Selassie added that the contribution expected from the ITU in the training of skilled manpower for the implementation of the 6-year telecommunication services expansion program in Ethiopia is great. He said that the lack of extensive telecommunication services in our country has adversely affected drought-hit areas. Ethiopia, apart from being one of the members of the ITU, is among those countries which are making extensive use of telecommunications; he called for ITU to give priority to African states.

For his part, Mr Butler said that his present visit to Ethiopia will enable him to look closely, for himself, at the development of the telecommunication services in our country and, in general, on ways and means to giving better telecommunication services to the African continent.

Present during this ceremony were: Comrade Yusuf Ahmed, WPE Central Committee member and transport and communications minister; Comrade (Tefera Haile Selassie), WPE Central Committee member and deputy minister at the office of the chairman of the Council of Ministers.

CSO: 5500/98

MOZAMBIQUE

BRIEFS

MEETING DISCUSSES INTERFERENCE--The fifth conference of the Southern African Telecommunications Administration, SATA, continued in Maputo this afternoon. The conference was opened this morning by Minister Rui Lousa. A spokesman for the conference told our correspondent that the subcommittee for the control of frequencies held a meeting yesterday. However, the meeting has not been concluded and a 2-hour session is expected to be held soon. Yesterday the participants agreed on the need for coordination among the SATA members in order to reduce problems caused by interference. The subcommittee meeting has already agreed on ways of coordinating UHF and VHF frequency bands in accordance with guidelines laid down by the International Telecommunication Union. [Excerpt] [Maputo Domestic Service in Portuguese 1700 GMT 12 Feb 85]

FRG TELECOMMUNICATIONS CONTRACT--In Maputo today Mozambique Telecommunications and the FRG Siemens A.G. firm signed a fifth contract for the first phase of a telecommunications development project in our country to rebuild and broaden the local telecommunications network in Beira. The contract, valued at approximately 20 million Deutschemarks, will be financed by the African Development Bank within the framework of the Southern African Development Coordination Conference. The contract was signed by Rui Fernandes, director general of Mozambique Telecommunications, and (Hans Beyron), the Siemens A.G. director of exports. [Text] [Maputo Domestic Service in Portuguese 1700 GMT 9 Feb 85]

PROVINCIAL TELECOMMUNICATIONS SYSTEM--A project for the rehabilitation of a tropospheric communications system will be implemented in Zambezia Province shortly. According to the director of Quelimane telecommunications, the Quelimane-Beira and Quelimane-Nampula interprovincial project will cost \$5 million. Once it has been completed, the project will improve and facilitate communications between the central and northern areas of the country. He added that part of the equipment for the project has already arrived in Quelimane city. [Text] [Maputo Domestic Service in Portuguese 1030 GMT 27 Feb 85 MB]

CSO: 5500/100

NIGERIA

BRIEFS

FRCN TOP OFFICIALS RETIRE--FIVE top officials of the Federal Radio Corporation of Nigeria (FRCN) retired yesterday. They are the Assistant Director (Technical Services) Mr. I. O. Akinyemi and a well known musicologist Mr. Adam Fiberesima (alias "Prof") were among five heads of departments who left the services of the Federal Radio Corporation of Nigeria (FRCN). Mr. Akinyemi (GL 15) was the assistant director (Technical Services) while Mr. Fiberesima (GL. 14) was the manager of programme (North Africa) and Overseas for Voice of Nigeria. Others were Mr. J. O. Shodeke (GL. 14) Technical officer (Workers Services); Mr. T. B. Ugorji (GL. 14) Chief Engineer, Mr. Izekor, (GL. 14) who retired voluntarily and was chief internal auditor, director general's office. None of the affected officials was available for comment. Mr. Ugorji had served the FRCN for over 38 years. Meanwhile, the director general was not available for comment and was said to have gone for conference. It will be recalled that about 1,700 staff of FRCN were retrenched in the first week of this year. [Text] [Lagos DAILY TIMES in English 26 Jan 85 p 2]

CSO: 5500/90

26 March 1985

SOMALIA

**SATELLITE STATION TO BE BUILT IN HARGEYSA**

EA032215 Mogadishu Domestic Service in Somali 1115 GMT 3 Mar 85

[Excerpts] Dr Abdullahi Ossobleh Siyad, minister of post and telecommunications, has revealed that up to 130 million French francs have been allocated for the construction of a satellite station to be built in the northwestern regional capital of Hargeysa. The minister stated this yesterday evening in an interview at Mogadishu Airport on his return from France and Italy.

Dr Abdullahi Ossobleh Siyad said that he had signed an agreement with the French Institute for Investment while in Paris, under the terms of which a satellite station would be built in Somalia. He said this would play an important role in the development of telecommunications, particularly in TV transmissions, telex services, and generally in linking internal and external telecommunications.

Questioned on his visit to Italy, Abdullahi Ossobleh Siyad said he had signed an agreement with the Italian Government under the terms of which an international telephone system would be built in Somalia, and certain areas of the country's telecommunications system would be refurbished. He went on to point out that the agreement stipulated that the government of Italy would pay \$10 million and Somali would pay 16 million Somali shillings to meet the costs.

Answering a question on when the execution of the projects would begin, Abdullah Ossobleh Siyad said the projects will be started within this year and are expected to be completed within 2 years.

CSO: 5500/101

SOUTH AFRICA

## NEW RADIO SERVICES INVOLVED IN 'BATTLE OF AIRWAVES'

Johannesburg SUNDAY EXPRESS in English 27 Jan 85 p 16

[Article by Tony Koenderman]

### [Text]

THE battle of the airwaves will reach new peaks this year with the launching of three new SABC radio services.

The further regionalisation of the radio services follows a trend overseas towards local stations — 'electronic knock and drops' — which are now clearly established here too.

Thus while national services such as Springbok Radio and Radio 5 have suffered severe audience losses, regional stations have shown strong growth or, at worst, held their own.

According to AMPS, Springbok, for example, saw its 'yesterday' white audience decline from 997 000 (31.4% of its market) in the third quarter of 1983 to 983 000 (29.1%) in the third quarter of 1984, and Radio 5 from 206 000 (6.5%) to 176 000 (5.2%).

But with the single exception of Capital Radio, the regional stations made audience gains, led most spectacularly by 702 which increased its 'yesterday' white audience from 264 000 (8.3% of its regional market) to 382 000 (11.3%).

Highveld increased white listenership from 521 000 (27.1%) to 561 000 (27.8%), Port Natal from 108 000 (26.9%) to 119 000 (27.6%), and Good Hope from 185 000 (22.6%) to 204 000 (22.7%).

Good Hope's coloured listenership rose from 512 000 (40.2%) to 414 000 (38.8%). Capital dropped from 64 000 (2.0%) to 61 000 (1.8%).

In setting up the new stations (based in Pretoria, Bloemfontein and the Eastern Cape), the SABC will not

compete directly with the independents — except that 702's Pretoria audience will now have another choice in Radio Jacaranda which will probably reach people in Midrand and Kempton Park.

This is probably just as well for the corporation, as its experience in combating 702 does not, on the face of it, seem to have been too successful. The SABC, of course, maintains that 702 and Radio 5 are not in direct competition, and this is true.

Radio 5 is a national station and its audience is a bit older, says the SABC. But advertisers see them as the two pop stations serving the Pretoria-Witwatersrand-Vereeniging area, and therefore very much in competition.

The success of 702 is built very much on meeting the needs and interests of the community it serves, and in this respect announcer John Berks has become a symbol of 702's style. "Did you hear what John Berks said this morning?" goes the advertising slogan.

And while SABC now plans to take a similar approach, and is talking of phone-in and discussion programmes, such

plans would involve something of a cultural shock for the corporation.

"Auntie SABC does not exactly have a record of listening to the people," said one advertising man. "Nor is it innovative or daring. The new stations are likely to be typical of its services — safe and middle-of-the-road."

While meeting community needs is seen as the answer, the problem really came to a head because of television, which has eroded radio's evening audiences — even on regional services — to a startling degree.

### Startling

On the English service, for example, the morning peak audience (during Radio Today) is 234 000 listeners. The evening peak (between 7pm and 8pm) is a tenth of that — 24 000.

The Afrikaans service audience shrinks from a morning peak of 510 000 to an evening peak of 170 000, Springbok's from 607 000 to 94 000, and Highveld's from 222 000 to 44 000.

CSO: 5500/99

SOUTH AFRICA

ESTABLISHMENT OF LOCAL RADIO STATIONS URGED

Johannesburg RAND DAILY MAIL in English 8 Feb 85 p 11

[Article by David Furlonger]

[Text]

SOUTH AFRICA must follow the lead of Australia, the US, Britain and other Western nations and establish a network of local radio stations.

Mr Bernie Rayner, media director of Mundels' advertising agency, believes the country could support more than 100 local radio stations.

"With the recent revamping of SABC radio, the time has now arrived where the whole question of radio in this nation — in particular commercial radio — should be relooked at with the objective of making it a means of communication with and for the people."

In advertising terms he believes national radio to be a thing of the past. It has, along with newspapers and magazines, declined in importance as an advertising medium.

The answer is for radio to become more localised in both area and coverage.

"There are too few radio stations with programmes that are far too broad for the majority of the population groups, interests and/or advertisers.

"What is now necessary is the development of commercial radio along the lines of the US, Australia and even other countries like New Zealand and Britain. This would involve a dramatic increase in the actual number of stations but with each station serving a specific audience segment or community."

Mr Rayner contends that commercial radio should be thrown open to private enterprise and so give communities an opportunity to participate. To protect them from falling advertising revenues, local newspapers should be allowed to

operate one radio station or be part of a consortium.

To ensure these stations behave themselves they could be licensed by a central governing body, perhaps the SABC.

Mr Rayner defines a local radio station as one staffed by local people and running on low-powered transmission to serve one community.

Larger communities could be served by more than one station with each catering for particular segments within that community.

Besides offering an alternative to listeners, local radio would also benefit businessmen, offering them an effective and inexpensive advertising medium.

"At the moment, radio in this country is limited to the bigger advertisers who can afford to purchase time at the high costs currently involved."

There would still be need for some national radio services, such as the English and Afrikaans services of the SABC.

The stations best suited for breaking up into local concerns would be other SABC services — Highveld, Good Hope, Port Natal and Radio Five.

The American ratio is one local station to every 28 000 people. Using a slightly higher figure of 40 000 for SA, Mr Rayner suggests that the white, coloured and Indian populations alone could support more than 100 stations. Black communities could support more but Mr Rayner offers no ratio for this section of the population.

"In the short-term, it should not be a problem for SA to support at least 100 stations of the local variety, provided they are operated on the same basis as in the US — the basis on which commercial local radio should be operated."

CSO: 5500/97

JPRS-TTP-85-008  
26 March 1985

SOUTH AFRICA

SABC ANNOUNCES TV1 SCHEDULE CHANGES

MB011730 Johannesburg Television Service in English 1600 GMT 1 Mar 85

[Text] The South African Broadcasting Corporation is to bring about extensive changes to TV1's program schedule from 1 September. The director general, Mr Riaan Eksteen, says in a statement the changes are intended to improve services in light of viewers' needs and habits.

On weekdays the following changes will come about: Daily broadcasts will begin with a short news bulletin at 1600 followed by children, youth, and family programs with an entertainment basis, and by educational programs. The 1800 and 2000 news bulletins will be replaced by a main bulletin at 1900, preceded by a weather report. After the main bulletin there will be a half an hour of general entertainment programs. After 2000, public affairs programs will be broadcast from Mondays to Thursdays. Entertainment will follow from 2045. The late news bulletin will be at about 2300. Lighter programs will come more to the fore on Fridays and Saturdays. Sundays will see more attractive television through earlier starting times and the transfer of existing programs. On Sundays, the news and a program of news related affairs will occupy the slot from 2000 to 2100.

New times for the news on the black services will be announced soon. The language switchover on TV1 will still be at 2000.

As far as radio is concerned, the English and Afrikaans services will broadcast a main news bulletin at 1800 in the evening.

CSO: 5500/104

JPRS-TTP-85-008  
26 March 1985

SOUTH AFRICA

BRIEFS

NEW SATELLITE LINK--South African businesses will have immediate access to credit information about more than 175,000 Australian companies when a new direct satellite link between Dun and Bradstreet's offices in the two countries becomes operational. The new link will make it possible to get comprehensive information within minutes, and the use of satellite link is not more expensive than older methods. Dun and Bradstreet already has contact with its offices in Britain via the Department of Posts and Telecommunication's SAPONET network. DIE BURGER, January 7. [Text] [Pretoria SOUTH AFRICAN DIGEST in English 11 Jan 85 p 23]

CSO: 5500/93

JPRS-TTP-85-008  
26 March 1985

TANZANIA

BRIEFS

ADMISSION INTO TELECOMMUNICATIONS ADMINISTRATION--Angola and Tanzania have been formally admitted as members of SATA (Southern African Telecommunications Administrations). The decision was taken by the fifth SATA conference which began in Maputo last Tuesday and is scheduled to end tomorrow. The original seven SATA members are Botswana, Lesotho, Malawi, Mozambique, Swaziland, Zambia and Zimbabwe. With the new additions, the organisation now has exactly the same membership as SADCC (Southern African Development Coordination Conference) [Text] [Bulawayo THE SUNDAY NEWS in English 17 Feb 85 p 9]

CSO: 5500/102

ZIMBABWE

#### UNIQUE HIGH-TECHNOLOGY TRANSFER FROM YUGOSLAVIA TO HARARE

##### WRS's New Production Facilities Opening

Harare THE HERALD in English 21 Feb 85 "Business Herald" Supplement p 1

[Text] A UNIQUE example of high technology transfer between North and South will be officially unveiled in Harare today.

WRS Electronics (Pvt) Ltd and three senior executives of Yugoslavia's ISKRA Corporation will witness the official opening of WRS's new production facilities for the Yugoslav company's award-winning telephones and telephone exchanges.

The ceremony will be attended by the Minister of State (Industry and Technology), Cde Kumbirai Kangai, and the Minister of Information, Posts and Telecommunications, Cde Nathan Shamuyarira.

The technology for the exchanges and telephones has been provided to WRS completely free of charge or obligation by the Yugoslav company and, apart from giving WRS a much needed opportunity to diversify, will also enable Zimbabwe to earn valuable foreign exchange by exporting the equipment to neighbouring countries.

One of Zimbabwe's largest manufacturers of electronics, WRS built up its reputation on the military telecommunications equipment it supplied to Government.

But with the coming of independence there was a dramatic drop in the demand for this type of hardware and the company began to look for export markets to keep this side of its operation in production.

While the company did find new customers it also found itself in competition with large American and European suppliers, often armed with aid packages, and potentially lucrative export markets were lost.

WRS decided to explore other, non-military fields of electronics and discovered that one possibility was to manufacture under licence.

Unfortunately this involved the payment of heavy royalties in foreign currency to the patent holders, a prospect the Reserve Bank did not view with enthusiasm. In addition, the wholly Zimbabwean-owned WRS would have to compete directly with the giant multinationals.

As part of its investigations WRS contacted ISKRA, whose designs for telephones and exchanges had won several awards and had already presented the Government with telephones and equipment.

To WRS's surprise ISKRA offered to give the company the technology for the exchanges and the streamlined ETA 80 telephones--and technical data was transferred to the WRS computer and production began in October last year.

Since then WRS has installed complete internal telephone systems for a number of firms and organisations and held supplementary training courses for PTC engineers working with the Yugoslav equipment donated to the corporation.

But WRS realises that it will have to rely primarily on export markets if its new venture is to remain commercially viable as there is not enough foreign currency available from the Zimbabwean market alone. As a result, it has launched a major export drive, particularly in the SADCC and PTA regions.

#### Partnership Will Boost Telephone Efficiency

Harare THE HERALD in English 22 Feb 85 p 3

[Text] ZIMBABWEAN companies have a lot to gain from partnership with Eastern European countries whose industry is eager to share their technology, the Minister of Information, Posts and Telecommunications, Dr Nathan Shamuyarira, said yesterday.

"Companies in Western Europe guard their technology jealously. Socialist countries will not eat you up but are willing to share their technology which is just as advanced."

Speaking at the launching of a partnership between WRS Electronics and Yugoslavia's ISKRA Corporation for the manufacture of electronic telephone exchanges and telephone equipment, Cde Shamuyarira said the deal would contribute to the Posts and Telecommunications Corporation's overall modernisation programme.

The PTC was considering the manufacture of components for telecommunications and with the new production line at WRS, Zimbabwe would cut down on the "millions" it was spending on imported equipment.

Cde Shamuyarira said the PTC had raised \$240 million from its own funds to replace old equipment. The replacement exercise, which had recently started, had contributed to the problems the public was experiencing with telephones.

Heavy rains had added to the problem and the public was urged to be patient because when the exercise was completed in 1987 internal communications would improve greatly.

Zimbabwe's telecommunications system would be further boosted when the Gweru international exchange was fully operational next month and with the completion of the earth satellite station at Mazowe. Cde Shamuyarira said.

The Gweru exchange would enable Zimbabweans to dial direct to most countries in the world while the earth satellite would stop reliance on South Africa for communications.

Cde Shamuyarira said mere replacement of equipment without a viable telecommunications industry was useless. It was therefore a step in the right direction for WRS and ISKRA.

The opening was also witnessed by the Minister of State (Industry and Technology), Cde Kumbirai Kangai, who said Zimbabwe was the only country in Africa to have the technology introduced through the partnership.

#### Commentary

Harare THE HERALD in English 22 Feb 85 p 10

[Text] In the quest by African countries to ensure sustained development, they have to make important and far-reaching choices about things as varied as the source and type of aid used, the kind of development programme adopted and, inevitably, what kind of technology they need. They all want to move from their historical niche of supplier of raw materials and receiver of finished products so that they can shift their economies on to a more diversified and less vulnerable footing.

But, as many have learned to their cost, technology for technology's sake without taking into consideration the particular needs and environment of their individual countries, can be disastrous. As a result, appropriate or alternative technologies have come under increasing scrutiny in development circles and the resulting benefits to the board mass of the people have been considerable.

But there is no escaping high technology altogether, particularly in the field of communications where developments have taken place fast and furiously. African countries have until recently been rather left behind in the worldwide communications network explosion, but wide-ranging efforts on a national and regional basis to rectify the situation are beginning to bear fruit.

It would be difficult to support wholeheartedly those development fans who in recent months have claimed that multi-million-dollar communications systems are vital to development (the argument being that efficient phones will attract more investment), especially when there is just so much else that needs attention--but one can't help but agree that more and better telephones would make life easier.

But, as the experts pointed out, the investment needed to update equipment and services would be huge. One estimate put it at US\$240 billion over the

next 20 years throughout the Third World. As most of the equipment will have to be imported, this will be a heavy burden for foreign exchange-strapped countries to bear.

It is therefore encouraging to see that efforts are being made, in Zimbabwe, for example, to become more self-reliant in this highly competitive field. Through the unique example of high technology transfer between Yugoslavia's ISKRA and Zimbabwe's WRS Electronics (yesterday's Business Herald), Zimbabwe has started making ISKRA's award-winning telephones and exchanges. Not only will this help us enlarge the pool of telecommunications expertise slowly being built up in the country, but it will also help us earn foreign exchange by exporting to neighbouring countries.

True, certain components will have to be imported as we do not yet have the expertise to make them, but the units will initially have a 40 percent local content, with the idea being to increase the percentage gradually.

The development is also interesting as it is a perhaps long overdue shift away from the concentration on "traditional" sources of supply and shows that co-operation between an Eastern-bloc country and an African country is possible--to the advantage of both.

CSO: 5500/103

USSR

U.S. APOLOGIZES FOR RFE BROADCAST TO POLAND

LD181624 Moscow in English to North America 0001 GMT 18 Jan 85

[Text] The United States State Department has apologized for a broadcast by Radio Free Europe to Poland, beamed earlier this month. Here are some details:

In response to a protest by the Polish Government, the State Department said on Wednesday it regretted the broadcast, which implied that Poland was similar to Nazi Germany. Radio Free Europe like Radio Liberty is now funded by the American Government. In fact they have been funded by it for several years. Before they were funded by the CIA and critics called Radio Free Europe and Liberty cold war relics. The stations' policy has not changed following the transfer; rather it was seen as a step to remove the CIA from the spot and make it look like the subversive station receiving a new lease of life.

But have they dropped insults and rudeness? Is there less bias or effort to split? Nothing of the kind. Radio Free Europe played a key role in enticing antigovernment feelings in Poland. It was said to have relayed coded instructions to the underground. Numerous protests by the Polish authorities have gone unanswered. Trust and sympathy are not won by subversion nor are understanding or friendly feelings promoted by malice. But cold war relics don't go on the air to promote all this. And former Nazi collaborators and turncoats are not recruited to establish any bridges of understanding. The role of such radio stations is to sow seeds of hatred and distrust.

The apology of the State Department for the Radio Free Europe broadcast on 5 January was offered because the station had overdone it. Instead of staying within certain limits of the ideological warfare against the socialist nations it came out with an insult of the country which has diplomatic relations with Washington. But the apology does not mean that this warfare will stop and that anti-Soviet and anti-socialist campaigns will cease. True, words like crusades against socialism have been dropped, not crusades themselves.

CSO: 1812/146

USSR

VOA BROADCASTING FROM COSTA RICA SCORED

PM291601 Moscow IZVESTIYA in Russian 28 Jan 85 Morning Edition p 4

[Undated dispatch by own correspondent V. Silantyev under the rubric "Backstage of Events": "Poisoned Radio Arrows"]

[Text] Mexico--Honeyed statements about loyalty to democracy and freedom and respect for human rights have been gushing from Washington recently as though from a horn of plenty. But the trouble is that the thicker the flow of sweet words, the less they are believed by those to whom they are addressed. Nonetheless, on the banks of the Potomac they prefer to act on the principle that a lie repeated a thousand times may be accepted as the truth.

For decades several powerful VOA transmitters have been making round the clock efforts from U.S. territory to strike with their poisoned radio arrows every corner of the world including the enormous region situated south of the Rio Grande. It was decided not so long ago to reinforce VOA's long-range artillery with very powerful short-wave transmitters which would strike their target at close range, taking direct aim, for instance, against Cuba from Miami and against Nicaragua from Costa Rica.

That is how plans to create two additional VOA radio relay stations in the western hemisphere were born and have already been implemented. It was not hard to find a site for one of them on the territory of Florida. But to install the second point it was necessary to resort to some resourcefulness because Costa Rica is a sovereign country and its laws had somehow to be circumvented.

The Costa Rican weekly UNIVERSIDAD has described in detail how Washington's propaganda adventure was carried out. It began with the purchase of 1 square kilometer of wasteland from one Gaston (Peralta), the owner of an estate in the north of Costa Rica, near the border with Nicaragua. The deal cost Washington \$0.5 million. And the propaganda work superintendents themselves settled in the neighboring city of Quesada--the staging post for shipping weapons and ammunition to the "Nicaraguan "contras."

As a screen for legalizing VOA broadcasting from foreign territory, they found 13 men (the weekly names them) from the so-called "Association of Information and Culture of Costa Rica" who acted in close contact with the U.S. Embassy in San Jose. As a result, according to the documents and maps of the local town council the notorious "square kilometer" together with all the structures erected on it is now registered as U.S. property.

The VOA outpost, according to UNIVERSIDAD, now looks like "a veritable fortress, rather like a Nazi concentration camp. It is surrounded by a 3-meter metal fence of triple barbed wire. Inside there is a 7-meter control zone running along the fence and behind it a second electrified metal fence. Every sector of the "square kilometer" is monitored with the aid of laser and television devices. Everything is ready for the troubled waves of Washington's "voice" to take to the air.

Indeed, they are not only troubled but also hostile to the peoples of Central America struggling for their liberation from the chains of U.S. imperialist rule and exploitation by the local oligarchy. There can be no doubt that the "voice" will try to explain the stormy events taking place in the region by some kind of "export of revolution," disregarding the obvious facts of the acute socioeconomic conflicts which are shaking the region and leading to armed struggle. Is it not symbolic that Washington's new propaganda outpost is surrounded by a double fence?

CSO: 1807/199

USSR

SRI LANKA VOA SITE SAID TO SERVE 'PSYCHOLOGICAL WARFARE'

LD052147 Moscow World Service in English 1531 GMT 5 Feb 85

[From the "Focus on Asia" feature]

[Text] Reports from Colombo say that the Voice of America is going to build a big radio relay station in Sri Lanka. The ceremony of laying the foundations is expected to be attended by a leading figure from the United States Information Agency, to which the Voice of America belongs. Vladimir Nikolayev makes this comment:

Observers in Asia have described the construction of the new radio relay station in Sri Lanka as an integral part of the global psychological warfare launched by the United States against the developing world and the movement of nonalignment. Radio propaganda is supposed to play a special role in it. The administration is spending \$1 billion on the modernization of the main mouthpiece of psychological warfare, the Voice of America. In the next 5 years, eight new transmitters of the radio station are to appear in various parts of the globe. One of the biggest radio centers will be built in Sri Lanka, and it will broadcast programs to South Asian countries.

The first program of the service started on February 24th, 1942, with the words "We shall be telling you the truth." The masters of the Voice of America assured their audience that their purpose was to acquaint other nations with history, life and culture of the United States, its policies and its approach to international developments. However, time has shown that the true purpose of the Voice of America is to impose the American way of life on Asian nations. The American ideologist Theodore Sorensen has said that the task of government propaganda is to persuade other nations to think and act the way America wants them to. The close links of the Voice of America with the Central Intelligence Agency are also illuminating.

Now why is Washington expanding psychological warfare, especially against South and Southwest Asia, where the radio station in Sri Lanka will beam its program? Statements by Washington leaders make it clear that special attention will be paid to radio propaganda against Afghanistan, the chief target of the ideological aggression of the United States. Washington is apparently alarmed by the achievements of the Afghan revolution, and the growing international authority of Afghanistan. The purpose is to sow seeds of mistrust in

the government and distort the essence of social and economic changes in the country. And Washington is spending new millions of dollars for the purpose.

Washington is also alarmed by the fact that the public in India, Bangladesh, Sri Lanka and Nepal is learning the truth about the developments in Afghanistan and the organizers of the undeclared war against that sovereign state. News analysts in Asia link the escalation of Washington's psychological warfare in South Asia with the growth of the international prestige of the movement of nonalignment, and its active anti-imperialist stand and determination to contribute to the struggle for peace, disarmament, against American military bases, and American military presence in the Indian Ocean.

The public of Sri Lanka was shocked when it learned that the territory of the country would be used for imperialist propaganda of the United States. The Freedom Party, Socialist Party and Communist Party have denounced the construction of the radio relay station of the Voice of America in Sri Lanka.

CSO: 1812/120

USSR

PROJECT TO MAKE COMMUNICATIONS SATELLITES OBSOLETE

LD201905 Moscow TASS in English 0958 GMT 20 Dec 84

["A TV Link-Without Satellites"--TASS headline]

[Text] Moscow December 20 TASS -- The realisation of a project which has been worked out by Soviet scientists will make it possible to give up many communications satellites.

By using the property of a powerful radio wave to concentrate plasma into a clot the formation of which was earlier ascribed only to cosmic rays, the scientists intend to create a cloud of "hot" charged particles in the ionosphere. It may serve as an excellent "mirror" for television waves. Moreover, the mirror cloud can be given such forms and properties that it will send radio and television signals back to strictly defined regions on earth's surface.

L. Lobachevskiy, director of the Institute of Terrestrial Magnetism, Ionosphere and Propagation of the Radio Waves of the USSR Academy of Sciences, where the project has been worked out, has pointed out in an interview with journalists that powerful electromagnetic pulses will not destroy the ionosphere which reliably shields the earth from deadly cosmic rays. On the contrary, the pulses increase the concentration of ions in the near-earth plasma and, it means, its shielding properties as well.

The purpose of the research being conducted by the scientists is not only to get to know better "our common home", the earth. Among practical tasks which are now being solved there are both commonplace ones -- such as, for example, forecasting interruptions of radio communication -- and almost fantastic ones. In its plans for the future, mankind sets great hopes on orbital power stations with huge panels of solar-cell batteries. Power produced by them is intended to be transmitted to earth by means of superhigh frequency beams. But how will the beams penetrate the ionosphere? what changes will they bring about for it? And how should undesirable consequences be avoided? Science should give answers to these and to many other questions before thousands of manmade suns will start shining in the skies.

CSO: 5500/1015

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USSR

BRIEFS

RADIO-TV PROTOCOL WITH KUWAIT--A protocol on exchanges in the field of radio and television between the USSR State Committee for Television and Radio Broadcasting and the Ministry of Information of Kuwait was signed in that country's capital. It covers the period 1985-86. The sides will send each other feature and documentary television films and television programs about the life of the two countries, and also radio programs and music recordings. [Text] [Moscow Television Service in Russian 1335 GMT 15 Jan 85 LD]

CSO: 1812/146

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AUSTRIA

BRIEFS

FRENCH CONTRIBUTIONS TO IIASA--Vienna (APA)--The "all-clear signal" was sounded for the IIASA, the International Institute for Applied System Analysis, which has its headquarters in Laxenburg near Vienna. At a press conference on the occasion of his 3-day official visit to Austria, Hubert Curien, French minister of research and technology, denied rumors about a potential cut of France's official participation in the research agency. At present, he said, France is supporting the institute with about 6.3 million schillings annually. These funds will not be reduced in the future, although they will be allotted for specific projects. "The IIASA has always been important for France, and will remain so in the future," the French research minister emphasized repeatedly. In this context he primarily drew attention to the importance of the IIASA as an East-West institute; which owing to its very structure has quite a few advantages over any national institution. [Text] [Vienna ARBEITER-ZEITUNG in German 23-24 Feb 85 p 3]

CSO: 5500/2594

DENMARK

DETAILS ON NATIONWIDE FIBER OPTIC CABLE NETWORK

To Handle Most Telecommunications

Copenhagen BERLINGSKE TIDENDE in Danish 21 Jan 85 Sect III p 7

[Article by Henrik Damm: "What the Hybrid Network Can Do"]

[Text] The telephone companies are in full swing with burying fiber optic cables along the higher-level network.

While the debate regarding the wide-band network and the hybrid network has ebbed and flowed at Christiansborg, in industry and among the people, both JTAS [Jutland Telephone Company] and KTAS [Copenhagen Telephone Company] have established a number of wide-band connections as the laying of fiber optic cables is in full swing. At the present time KTAS has established 60 wide-band connections in which each cable can send two million pieces of information per second. The number of wide-band connections at JTAS is slightly smaller, but they can do the same. One of the big questions is when will these networks be available for a greater percentage of our businesses and the rest of the "Danish family?"

It is happening with the hybrid network and wide-band services as it did with electricity, telephones, telex services, railroads, etc. It will spread like rings in water from the cities and the densely populated areas. In the TV area this means that 300,000 households out of 2.3 million must arm themselves with a little patience. But around the year 2000 it is figured that all homes can have fiber optic cable service installed.

This has been laid on the table as a fact by Danmedia General Secretary Engineer Mogens Boman. Danmedia and the Study Society for Informatics under the Academy for the Technical Sciences have developed a number of reports and brochures regarding the future's communications possibilities.

The tentative plan is to the effect that about a dozen receiving stations are to be set up around the country, but Mogens Boman foresees that we will end with three. They will receive signals from satellites and relay West Germany's, East Germany's, Sweden's and Norway's TV programs. In this case it is most logical to place them on Lolland-Falster, in South Jutland and North Jutland. From these three receiving stations signals can be sent via fiber optic cables

out to about 1300 distribution points in the larger cities. From there local common antenna systems can pick up TV programs and relay them to the consumer, via traditional cables--so-called coaxial cables. This is the type used to connect antennas and TV sets. This mixture of cable types has produced the name "hybrid network," for hybrid means a mixture or crossbreed.

The 0.1-mm-thin light guides present in the higher-level telephone network can be used for other things and more than for transmitting TV signals or telephone conversations. They can also be used for wide-band services, which business especially will have use for. Wide-band services include data transmission at extremely high speeds, video conferences and the transmission of color graphics of high quality. "Wide-band" is an expression for how large a frequency spread there is in a band. It has nothing to do with whether it is one, two or three centimeters wide. On the contrary. The thinner a light guide is, the more it can transmit, Mogens Boman reports.

Both KTAS and JTAS have at the present time established a number of wide-band services. For KTAS it is a question of 60 connections, each with a capacity of two million pieces of information per second. A TV program of the same quality as we know today would require 70 million pieces of information or 35 times as much. It is technically possible, but the demand is minimal.

"We have established an experiment with video conferences between KTAS and JTAS in Århus, and even with this 'small' capacity it functions excellently. The live pictures are a little 'stiff' but it is an outstanding tool for the presentation of machine drawings or the like," KTAS Department Engineer Jørgen Allesen-Holm says.

Among the firms which have established wide-band communications, J. Allesen-Holm mentions B & W Diesel, which has about 100 terminals distributed over the offices in Avedøre Holme and at the plant in Christianshavn. Wide-band communications make it so that staff members at both places can "thumb through" directly on screens without waiting for several seconds.

"Communication at two million pieces of information per second will cover the demand most concerns have, and it will be a question of very few customers, a handful perhaps, for this large capacity. A possibility is Rigshospitalet [the General Hospital] in Copenhagen, which could have a need for transmitting live pictures of very high quality at high speed," J. Allesen-Holm says.

#### Boosts Country's Technology Competitiveness

Copenhagen BERLINGSKE TIDENDE in Danish 21 Jan 85 Sect III p 9

[Article by Allan Boldt: "Wide-Band Makes It Easier to Utilize Neighbor's Knowledge"]

[Text] In Vejle they will utilize each other's knowledge in a better manner. Firms have a need for greater contact with educational institutions.

## Focus on Hybrid Network

"We would be glad to do without the unconscious discussion of the number of TV programs." Vejle Municipal Planning Head Peer Jacobsen is glad that the preliminary work for the "Vejle Wide-Band" project started at the other end of the spectrum.

There, where an attempt is being made to analyze what a wide-band network can be used for over and above satellite TV. And where information technology's many various utilization possibilities are being looked at.

They have had five different panels to make plans for the various uses of new telecommunications services--both with and without wide-band. And an interview study has been made among 20 different firms in the municipality of Vejle. In order to bring to light local business's needs in these areas.

It appears that firms are currently missing access to a number of different data bases--electronic archives filled with information--which can be accessed via a computer terminal. In these data bases firms can get information for use in, for example, product development, marketing and in choosing contractors.

The municipality of Vejle has already decided to meet this demand. The city council has granted about 300,000 kroner for the procurement of terminal equipment and hiring of a staff member who can take care of the firm's inquiries. And to educate interested business people who want to learn to know the equipment.

The equipment and staff member will be stationed at the Vejle Trade Center, which is a natural contact point for business. Most of the city's business people are glad to come here to begin with. They use the center for other telecommunications services--telefax and telex--and it is possible to get advice in export questions, rent halls, etc.

## Our Way

"The grant for terminals and a staff member for data base searching shows how we would like to see the project develop here," Peer Jacobsen relates.

"We have not formulated a total major plan which we are sitting here in a corner and waiting to get money for. On the other hand, we have done some analysis work which will make it possible to snatch bit by bit when opportunities exist for it."

Although Vejle's planning head emphasizes that "Vejle Wide-Band" is not a single combined project but a catalogue of ideas, the municipality, however, is banking on getting the technology administration's stamp. With the label: pilot municipality.

Transport Minister Arne Melchior (Democratic Center Party) and Environment Minister Christian Christensen (Christian People's Party) took part in a meeting in Vejle last Monday. And it was emphasized in the ministers'

contribution to the discussion that the government will earmark a number of millions--under the industry minister's 1.5-billion-kroner-large technological development program--for test municipalities in the field of information technology and the wide-band network.

Vejle expects to be able to get a rather large amount of support from this.

"It is surely to a great extent in the community's interest that experiments be begun so that it will be possible to assess the social consequences of the technology," Peer Jacobsen says.

The municipality has encountered a kind attitude on the part of the Jutland Telephone Company. Among other things, toward "Vejle Wide-Band's" large partial project--the structure experiment in the center of the city--where the idea is for an entire district to be furnished with wide-band services. And the district thereby will be furnished with the possibility of mutual two-way video communication.

A number of public offices and institutions are in the district: a technical school, business school, library, gymnasium, county municipality administration, labor arbitration office, a grade school, county central office for educational resources, the municipal administration, the Data Processing College, the hospital and industry office.

"The district was chosen so that we will get as many aspects as possible into the picture. But basically it will provide an opportunity to increase the interplay between the public and the private sector. Primarily within the education sector," Peer Jacobsen explains.

A working minute which summarizes the project's preliminary results reads regarding the objective of the structure experiment in the center of the city:

"To transfer knowledge between firms, institutions and townsmen."

"To be able to draw on common knowledge in research and development."

"To develop educational methods and educational materials for information technology."

"To meet the demand for advanced training and retraining."

"To improve communication and the influence of users on this."

#### Use Your Neighbor

In more down-to-earth Danish the common denominator of a number of the objectives can be translated into: to utilize the knowledge and resources which one's neighbor is in possession of. Regardless of whether it is a manufacturing firm, a library or a gymnasium.

"In order for this exchange of knowledge to be optimal, local data bases must be established. For example, a business file, a geographic and social data base and a contractor data base. There is a long list of possibilities," Peer Jacobsen says.

Access to the archives of public administrations will make it easier for firms and townspeople to keep track of the discussion of issues and planning. And, it is hoped, make the public debate regarding these questions more qualified.

Also, in connection with the influence of townspeople the idea is for the structure experiment in the center of city to be able to provide some experience. The west end of the city contains an area ripe for condemnation, where the municipality in years to come will carry out an urban renewal project.

In the "Vejle Wide-Band" project it is being proposed that an assembly point be established in the west end of the city, where the necessary equipment will be set up--terminals and printers, for example. A shut-down shop has been named as a possible assembly point. In the proposal it is recommended that the assembly point be "manned" in order to ensure contact with the municipal administration.

#### Business Data Transmission Aided

Copenhagen BERLINGSKE TIDENDE in Danish 21 Jan 85 Sect III p 14

[Article by Henrik Damm: "Informatics to Take Part in Removing 'Fat Around the Heart' of Organization"]

[Text] Business will not sit passively and wait until the hybrid network is a reality. The first step can easily be taken here and now, believes Novo Industri A/S [Inc.] Head Per Klitgaard Andersen. Over the past year the firm has had fiber optic service between individual buildings, a system which has functioned error-free.

#### Focus on Hybrid Network

An open and unpredjudiced attitude in connection with the introduction of information technology in Danish concerns will take part in "removing some of the fat around the heart" of the organization. Forces are being made available at all levels, which can form the basis for increased productivity, product development and planning. Electronic Data Processing Head Per Klitgaard Andersen of Novo Industri A/S, a Danish major consumer of high technology in both production as well as research and administration, says this. The latest shoot on the stem was the connecting up of a local computer network in which light guides connect individual buildings, in the beginning of 1984.

"The fiber optic network itself was not a big expense--a couple of hundred thousand kroner--in comparison with what we otherwise have invested, but it has the advantage over coaxial cables, which connect the individual computers in all buildings, that it can transmit signals over long distances without

amplifiers. In the longer term this technology will provide us a lot of possibilities. Optical fibers can carry more bits than the traditional cables; which will satisfy the future's demand for, for example, video conferences, transmission of color graphics, etc. As far as Novo is concerned, it will be of great importance, for example, that a production engineer at our installation in Kalundborg can have a question clarified there and then by one of our staff members in Copenhagen. But this will first be a question when the telephone companies and P & T [Postal and Telegraph Service] have the higher-level transmission network established and when the questions relating to charges have gotten clarified. In the first round it will be used for office automation in Bagsvaerd, but we are working on getting an interplay established between process-controlling systems and administrative tasks," Per Klitgaard Andersen says.

It is a question of planning tasks within economics, production, sales, long-term strategies and of carry-through activities like invoicing, production control, correspondence, statistics, research models and various forms of documentation work.

#### Planning

Information technology is one of the foundations of Novo's planning work. The rapid growth the concern has experienced in recent years would not have been possible without a well functioning control tool. A renewed plan for the next five years is required every year. On one hand, this imposes demands on leading staff members regarding serious and precise assessments of development, and on the other hand they have an opportunity over a 12-month interval to ascertain any aberrations and have this adjusted in time. Per Klitgaard Andersen attributes to the growth in planning work an essential role in connection with the other growth in, among other things, research, production and sales. Informatics is here in order to be used in every conceivable area.

#### Informatics and Better Understanding

For Per Klitgaard Andersen the concept of informatics includes three basic elements. It can contribute to increasing the firm's productivity; it provides an opportunity for far better planning, and as a result of this provides the concern with greater breakthrough power businesswise; and what is just as important, it provides the firm's staff members with access to completely new understanding. The latter, not least, is of vital importance for Novo's bioengineering research work. Per Klitgaard Andersen mentions as an example the fact that researchers, for example, can key information on cells into a computer and test theories and in this manner avoid using time on groping in the dark. A parameter which is not without importance, seen in the light of the rapid development of the bioengineering field.

#### Locally and Internationally

Novo is working on a central computer which will primarily serve domestic divisions, but will also be at the disposal of international subsidiary companies. In addition to this, there is a connection to the local computer

network in Bagsvaerd with more than 100 microcomputers and equivalent model 15 computers of Novo's subsidiary companies.

The microcomputers in the local network and in the subsidiary companies can send electronic mail to one another via an international satellite service. Novo expects much of this possibility, but the system as yet has not been 100-percent developed.

This is not due to technical circumstances, but as Per Klitgaard Andersen expresses it, all new work routines must have a certain breaking-in period.

8985

CSO: 5500/2564

DENMARK

**DOMESTIC FIRM WINS LARGE PHONE EQUIPMENT ORDERS ABROAD**

Copenhagen BERLINGSKE TIDENDE in Danish 17 Jan 85 Sect III p 2

[Article by Erik Bendt Rasmussen: "Large Orders Will Ensure GNT's Jobs"]

[Text] Coming out of 1984 with a profit and the supply of orders is for the first time passing the half billion mark. Norway's and Sweden's telecommunications administrations are buying a total of 280 million kroner worth of pay telephones.

Thanks to big new orders for pay telephones, Store Nordiske's [Great Scandinavian's] subsidiary company GNT Automatic in Søborg is coming out of 1984 with a profit. In recent years the company has had poor net operating results. Now it is advancing. At the beginning of 1985 GNT has the biggest supply of orders hitherto, i.e., 534 million kroner worth, and this is the first time that the company has been over the half billion kroner mark. Sales in 1983 equaled 311 million kroner.

The big orders for pay telephones will ensure jobs at the plant in Søborg for the next couple of years. There can also be a question of expanding the staff. The biggest order is from the Norwegian Telecommunications Agency, which has ordered 10,000 pay telephones to the tune of 150 million kroner. Before this, GNT has been in the process of supplying 130 million kroner worth of pay telephones to the Swedish Telecommunications Agency.

The supplying of sets to Norway will begin in the fall of 1985 and extend over three years. There is a question of a new type with which the caller can read for what the telephone call has been made, and if too much money has been put into the phone, the excess amount is automatically refunded. GNT will supply the same pay telephone to the Jutland Telephone Company and the Funen Municipal Telephone Company, whereas KTAS [Copenhagen Telephone Company] has not yet decided.

The new telephones include a specially developed computer system which is conducive to the fact that the telephone companies' service and maintenance costs are reduced considerably. The computer system automatically and currently registers the condition of telephones and relays this information to a central monitoring office. Wanton destruction and burglary are immediately recorded so that the telephone company can turn out and make repairs.

Until December of last year GNT Automatic was 49-percent-owned by L.M. Ericsson of Stockholm, while Store Nordiske had 51 percent. The holder of the share majority took over L.M. Ericsson's shares and at the same time added 30 million kroner of new share capital, so it now stands at 71 million kroner.

There are about 1000 employees in the company, which in addition to pay telephones also produces the danMark telephone, electronic terminals for PKK [charge card services] (the Dankort [Denmark Card]) and computer equipment.

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DENMARK

TELECOMMUNICATIONS AGENCY CHIEF URGES GREATER PRIVATE ROLE

Copenhagen BERLINGSKE TIDENDE in Danish 18 Jan 85 Sect III p 3

[Article by Henrik Damm: "On Way Toward Openness in Telecommunications Market"]

[Text] National considerations and the big EC countries' efforts to be self-sufficient in the telecommunications field have blocked liberalization of the telecommunications market.

Two hundred and seventy million EC citizens constitute 20 percent of the global market of \$50 billion for telecommunications, which in 1990 is expected to have grown to \$100 billion. However, the market is split because of the lack of common standards and approvals of types. A consequence of national special interests and the big member nations' efforts to be self-sufficient with professional equipment for telecommunications.

However, the first step toward an opening up was taken via the appointment of a committee consisting of representatives of industry ministries, telecommunications administrations and, not least, industrial concerns. A result of close cooperation between the EC Commission and the European telecommunications companies' organization, CEPT.

"In spite of international cooperation in the telephone and telex field over more than 100 years, it is difficult to reach agreement regarding new telecommunications services. We want to meet demands for increased data communication and in eight years industry's demand for teletext services will have tripled. And it is certain that wide-band services will have an important upswing in the 90's. A precondition for our being able to solve these problems is that the new communications systems receive the same standards over all of Europe, in order to ensure business and the electronics industry reasonable sales opportunities in EC and the rest of the world," P & T [Postal and Telegraph Service] Telecommunications Director Ib Lønborg pointed out at a conference on Thursday.

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FRANCE

BRIEFS

MATRA-CNET TELECOMMUNICATIONS COMPONENTS--The National Center for Telecommunications Research (CNET) and Matra-Harris have just signed a cooperative agreement concerned with research and production of components oriented toward telecommunications applications and using "CMOS" technology, the two firms announced on 19 December in Paris. The prototypes will be produced in the CNET pilot plant in Grenoble beginning in mid-1986 while production will begin in mid-1988 in the Matra-Harris factory in Nantes (subsidiary jointly owned by Matra and the American firm Harris). With this technology, circuits can be built which integrate micron-size links. These links will be used for future telephone equipment to provide simultaneous transmission of voice, video and computer data. This association is a follow-up of a similar agreement signed last 13 December between the Atomic Energy Commission and Thomson (the second hub in components production in the public sector). [Text] [Paris AFP SCIENCES in French 20 Dec 84 p 46] 9436

NEW CNET-LANNION DIRECTOR--Mr Jean Le Mezec, 55 years of age, general telecommunications engineer working at the CNET since 1955 and at Lannion (Cote-du Nord) since 1971, has been named director of the CNET Lannion B center. In this assignment he replaces Mr Jean Jerphagnon who has assumed other duties in the telecommunications industry at the CGE (Compagnie Generale de l'Electricite). Mr Le Mezec received the "General Ferrie" grand prize in electronics in 1971 for his work on waves in plasmas, ultra-high frequency tubes and laser applications. He was formerly at Polytechnique and the National Advanced School of Telecommunications. [Text] [Paris AFP SCIENCES in French 13 Dec 84 p 8] 9436

CIRCUITS RESEARCH AT CNET GRENOBLE--CNET management has just examined progress being made in the Grenoble center's master plan. Its purpose is to establish, by the end of 1986, a micronic CMOS technological branch transferable to industry and oriented toward the production of circuits specifically for telecommunications. The specificity of these circuits lies in the mixture, on the same chip, of logic and analog functions. The validation circuit of this product area will be a video decoder usable in digital video communication. Today, most of the basic techniques have been perfected and the organization of the product area has been defined. A cooperation agreement with a manufacturer is ready to be signed. The interim goal of having a logic CMOS product area by the end of 1984 will therefore be met. This product area is in

the process of final testing, the validation circuit being a spatial switching matrix with 16 inputs and 16 outputs of 108 Mbit s. [Text] [Paris L'ECHO DES RECHERCHES in French 3rd quarter 1984 p 91] 9436

SPOT GROUND STATION IN CANADA--A ground station designed to receive, beginning in the fall of 1985, data transmitted by the Spot-1 European satellite will be built at Gatineau (Quebec), not far from Ottawa, Canadian Minister of Mines Robert Layton announced on 6 December. This station, at an estimated cost of \$1 million (Canadian), will primarily receive pictures of earth which will be used by experts in agriculture, geology and territorial surveillance. The data obtained will be three times more accurate than those currently supplied by the Landsat Canadian satellite of American manufacture which reportedly will cease functioning in 1988. The Canadian government has signed a contract for receipt and dissemination of Spot-1 data with the Spot Image business firm of which France is the main stockholder, along with Sweden and Belgium. Spot-1, which should be launched in the second quarter of 1985 by Ariane, will also service the Prince Albert (Saskatchewan) Canadian station which is already picking up data transmitted by Landsat. [Text] [Paris AFP SCIENCES in French 13 Dec 84 p 28] 9436

CSO: 5500/2579

NORWAY

INCREASED COMPETITION SEEN FOR TELECOMMUNICATIONS MARKET

Oslo AFTENPOSTEN in Norwegian 9 Feb 85 p 10

[Article by Ulf Peter Hellstrom]

[Text] Full competition in the sale of telephones.

A division between the Telecommunications Agency's administrative and competitive activities.

Allowing cable companies to own ground stations for satellite TV.

A national long-range plan for telecommunications and data technology.

These are some of the main points in the Storting report on the future organization and work areas of the Telecommunications Agency which was presented to the government on Friday. The limit to the Telecommunications Agency's monopoly areas will be tightened up considerably as a result of combining data and telecommunications technology. There will be an overlapping of the equipment and services offered by the Telecommunications Agency and that offered by computer suppliers and suppliers of electronic equipment in the entertainment sector.

The Telecommunications Agency will continue to have a monopoly on expanding and operating the public telecommunications network in Norway but in principle the monopoly will end at the subscriber's doorstep. In its remarks the Ministry of Transport and Communications wrote that this means that businesses and institutions occupying several buildings within a geographic area will have the right to set up their own internal communications network. The Telecommunications Agency will lose its monopoly on the sale of office exchanges and telex equipment to companies. The same thing applies to the internal distribution network for telecommunications services within individual firms.

Two Networks

The telecommunications network and the cable television network will continue to develop as two separate networks. Not until fiber optics cable becomes so cheap that today's telephone subscriber network can be rebuilt will coordination of the two networks become practical.

Cable TV will continue to be under concession but the terms for the concession will be no stricter than they are now. Both private cable TV companies and the Telecommunications Agency will be able to participate in developing such facilities.

As expected the government favors separating the Telecommunications Agency's competitive activity into a separate subsidiary owned by the agency. Today this activity is organized in the project known as Telecommunications Agency Internal Business Communications (TBK), which employs around 1000 people and accounts for around a tenth of Telecommunications Agency sales. A complete accounting separation will prevent the Telecommunications Agency's earnings from monopoly services from subsidizing the competitive activity in the subsidiary company.

The new subsidiary will sell internal business communications systems, telex and telephone sets and other consumer equipment in competition with private suppliers. The government also proposes that the development and operation of facilities for cable TV be assigned to this subsidiary. This means that some of the agency's many electricians will be working for the subsidiary in the future.

Administrative duties, such as approving types of equipment, will be assigned to a separate body under the Transport Ministry. The reason is that the Telecommunications Agency through its new subsidiary will be engaged in competition with private companies. The requirement of administrative neutrality makes such a separation necessary.

#### National Program

The telecommunications and computer industry is about to pass the automobile and steel industry in size on the basis of value. The Storting report estimates the size of investments in telecommunications and computer equipment in Norway at 10-12 billion kroner per year. This market is growing rapidly. The rapid technical development means that emphasis must be placed on education, especially in technical subjects.

Public support for research and education in these areas is lower in Norway than in most countries in western Europe and North America. The government now proposes to step up this effort substantially and among other things it will prepare a national long-term plan for telecommunications and computer technology. Investments in concrete research and development projects will be increased in cooperation with industry, government departments and research bodies.

#### Telecommunications Federation Opposed to Cable Proposal

"The new competitive stock company that will compete with cable companies must have accounting systems we can rely on so that we do not get cross-subsidizing," said Ove Magndal, director of Norwegian Radio and TV Dealers' National Federation, in a comment on the Storting report on the Telecommunications Agency.

The deputy chief of the Norwegian Telecommunications Services Union, Tore Lundberg, reacted sharply to the proposal to assign cable television expansion to the competitive subsidiary. The Radio and TV Dealers' Federation includes a large number of private antenna installers and cable companies that will now have the Telecommunications Agency as a major competitor in the development of new facilities. Magndal said that the branch welcomes the new competitor but added that the competitive organization must compete on equal terms with private cable companies.

"The consultant report from the firm of Arthur Andersen pointed out that the accounting systems in the Telecommunications Agency are incomplete. The accounts must be completely separated from each other, but we are skeptical that this will be possible," said Magndal.

"The proposal concerning cable television expansion probably means that from 1000 to 2000 of our 5-6000 electricians will be shifted to the new subsidiary. We object to that. The authorities do not know the consequences of this proposal," deputy chief Lundberg of the Norwegian Telecommunications Services Union said. The union includes most Telecommunications Agency employees and has not yet decided how to react to the report.

6578  
CSO: 5500/2573

NORWAY

TELECOMMUNICATIONS AGENCY'S INVESTMENT PLANS UNTIL 1990

Oslo ARBEIDERBLADET in Norwegian 9 Feb 85 p 6

[Article: "Here is Parliamentary Report 48"]

[Text] The Telecommunications network and the cable television network will continue to be constructed separately.

The Telecommunications Service will have the sole right to construct and operate the public telecommunications network as far as the customer's wall. Within his walls, there will be free competition for both installation and equipment.

The Telecommunications Service will also compete here, in the form of a separate corporation. It will continue to be a subsidiary of the Telecommunications Service.

The competitive end of the Telecommunications Service will construct and operate cable television facilities and sell equipment to consumers. It is not yet clear whether or not the "Teleboutiques" of the Telecommunications Service can sell ordinary computer equipment.

The administration, type approval, and other functions of the Telecommunications Service will be separated out and placed under the Communications Ministry. This is to prevent preferential treatment to its own products.

The Telecommunications Service will invest almost 20 billion kroner by 1990. The key word is "digitization": digital technology provides lower operating costs for the telecommunications network. Digitization is the very foundation of an integrated network for the joint operation of telephone, data, telex, and other services. Half of the country's telephone exchanges will be digital by 1992.

More engineers must be trained. More emphasis must be placed on technical subject in schools.

A long-range national plan will be developed for telecommunications and data technology.

Oil revenues will be used to purchase the latest technology and much more money will be spent on development contracts with Norwegian industry in these fields.

9336  
CSO: 5500/2575

NORWAY

MINISTER GIVES ADDITIONAL DETAILS ON INVESTMENT PLANS

Oslo AFTENPOSTEN in Norwegian 15 Feb 85 p 34

[Article: "Data and Telecommunications Equipment for 40 Billion"]

[Text] Within the next 6 years we will invest more than 40 billion kroner in data and telecommunications equipment and networks. This was stated by Communications Minister Johan J. Jakobsen at a meeting last Thursday on the future of telecommunications. The minister stressed that one of our main goals must be for Norwegian industry to be competitive enough to capture a large portion of the sales in this market.

Communications Minister Jakobsen said that, for many years to come, the telephone would remain the dominant telecommunications service in Norway and that there is an enormous potential for the further development of this service. One reason for this is that interest in subscribing to additional telephone services in the individual home will increase as more home computer terminals are put into use.

During a review of the recently presented parliamentary report on the future organization of the Telecommunications Service and limitations on state monopolies, Minister Jakobsen also discussed the personnel situation at the Telecommunications Service. "It is vitally important for the introduction of new technology that the Telecommunications Service recruit and retain highly qualified workers. Consequently, there is a clear need to give the telecommunications service greater leeway in the area of wages," Jakobsen said.

Jakobsen said that the organization of future telecommunications in Norway was important because new and advanced telecommunications services would be of great importance for personnel welfare. "If we invest enough in the construction of such services, we will be able to give Norwegian industry an advantage over foreign competitors and increase efficiency in our public administration," said the cabinet minister, who added that the so-called teleinformatics industry was already enormous.

The communications minister mentioned that data technology offered the possibility of utilizing new forms of processed and stored information, making

telecommunications services more valuable to the consumer. One concrete example mentioned by Jakobsen was a new company in Kvinesdal that specializes in locating baggage for airlines. Since the company has access to the data banks of the airlines, it is able to match information on lost and found baggage. Other innovative Norwegian business leaders should be able to find other such markets, according to the cabinet minister.

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CSO: 5500/2575

NORWAY

COMMUNICATIONS MINISTER VIEWS FUTURE SERVICES, INNOVATIONS

Oslo ARBEIDERBLADET in Norwegian 9 Feb 85 p 6

[Article by Jan O. Helgesen]

[Text] Computer terminals will become as commonplace in the home as mixmasters are today. Every family will have its own parabolic antenna aimed at the satellite of its choice! The business community will be tied together by a nationwide "highway network" of telecommunications and computer services. Television may also be included eventually. Geographic distances will be less important--remote areas will be connected to population centers and vice versa. The conveyance of information will become far more important than the transport of goods. These are some of the personal views of our "future minister," Johan J. Jakobsen.

Yesterday Johan J. Jakobsen presented Parliamentary Report No. 48: On the Future Organization and Direction of the Telecommunications Service. The report takes up important questions concerning the future of Norway. The telecommunications and information industry is experiencing rapid growth. It is already passing both the steel and automobile industries on a worldwide basis. In Norway, too, it is estimated that about 50 percent of all jobs are related in one way or another to the information industry.

Race

All the industrial nations are trying to win the telematics race. Telematics, that large and important field in which traditional telecommunications and computer technologies fuse together to form new products and services, may eventually separate the first-class nations from the others. The EC has initiated an extensive program for information technology called ESPRIT.

One of the reasons for this is the enormous sales figures projected for the information industry. On a worldwide basis, sales will increase from \$237 billion in 1980 to \$500 billion in 1990. With an exchange rate of 9 kroner to the dollar, this represents a fantastic market. The race will be won by those who are able to combine research and industrial development and by those who find their niche in the market--their areas of specialization.

Today the OECD countries spend from 20 to 60 kroner per capita annually on

telematics. This is strictly an investment in the future. These are investments of public funds. In addition, extensive investments are being made and development problems carried out by large companies and multinational corporations. Norway's investments of public funds now amount to well under 15 kroner!

#### Life Blood

"Telecommunications and data technology will be the lifeblood of the nation in the year 2000," said Communications Minister Johan J. Jakobsen. His ministry is in charge of information transfer--in addition to ferry boats and road repairs.

"I often wonder if we should not have a separate ministry for telecommunications and postal services. This takes up most of my time and undoubtedly is one of the most future-oriented areas in which a politician could be involved."

#### Visions

Jakobsen sees great challenges in the new technology--and great dangers if we do not keep up.

"We must invest enough to make a difference. Today Norway does not even train enough engineers to meet the needs of Norsk Data alone. We must build a nationwide network for the exchange of information and it is only natural for the Telecommunications Service to do this."

Jakobsen believes that this field will have a great impact on all of us within the next few years.

"The terminal will be as commonplace as the mixmaster. Rapid advancements in the satellite field and in the area of small, inexpensive parabolic antennas will make it possible for the individual family to receive whatever television signals it wants. We will become much less dependent on geographic distances. The country will be bound together into an integrated whole--just as much on Andoya as in Asker."

Is it not conceivable that multinational corporations that invest several times our entire national budget will want to control these markets?

"Yes, but that means that we must invest more. We must find our own specialized areas, such as satellite technology, and become the best! We have no choice. Our entire future as a prosperous country depends on our knowledge--the right knowledge. As politicians, we bear a heavy responsibility for this, but unfortunately we are not doing enough.

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NORWAY

UNION CHIEF SEES PRIVATIZATION COSTING PHONE USERS

Oslo ARBEIDERBLADET in Norwegian 9 Feb 85 p 6

[Article: "More Expensive Telephones after Privatization"]

[Text] If parts of the Telecommunications Service are privatized, telephone services will be more expensive in large portions of the country. This was stated by the chairman of the Norwegian Telecommunications Services Association, Ove Ragnar.

"Partial privatization, such as the plan supported by the government, would hurt the customer. This is especially true for people who live in rural areas. If the customer must pay what the telephone services actually cost, then rates would be higher than the set rates now used by the Telecommunications Service," Ragnar said.

The government believes that the sale and installation of telephones should be subject to free competition. At present, the Telecommunications Service has a monopoly in this area. The Telecommunications Service has a set rate for this work, regardless of where the customer lives in the country.

"The set rates of the Telecommunications Service mean that the sale of profitable telephones compensates for the less profitable phones in rural districts. This is true of installation, service, and repairs. Free competition for the sale and installation of telephones would mean that each customer must pay the actual cost. That would be expensive for people in rural districts," according to chairman Ove Ragnar.

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NORWAY

CABLE COMPANIES HOPE TO RECEIVE SWEDISH TV VIA SATELLITE

Oslo AFTENPOSTEN in Norwegian 12 Feb 85 p 4

[Article by Ulf Peter Hellstrom]

[Text] The Telecommunications Agency has its plans ready to transmit Swedish satellite TV to cable companies over the entire country, including parts of western, southern and northern Norway that have not been able to receive signals from Sweden in the past. The political authorities will now take up the matter. To begin with this will affect over 50,000 households in towns along the coast and in built-up areas, but such an expansion of the programs offered to viewers will very likely lead to a rapid growth of cable service in this country. The Telecommunications Agency could start these transmissions just a few months after it gets the political go-ahead.

In the past Swedish television has been reserved for cable and joint antenna facilities in the eastern part of the country and close to the Swedish border that could pick up the TV signals on their own. Unused capacity on the ECS F-2 European communications satellite means that several hundred thousand more Norwegians can also receive Swedish television very soon. It will be up to the individual cable company or joint antenna association to acquire the ground equipment needed to unscramble the signals from the satellite. Big cities along the coast, like Kristiansand, Stavanger, Bergen, etc., have not been able to get Swedish television in the past.

In response to a question from AFTENPOSTEN, Telecommunications Agency information director Thor Viksveen confirmed that the agency has worked on this matter since the Antenna Installers' Group arrived at an agreement last year with Swedish Radio and those owning rights in this sector on a fee of around 50 kroner a year for cable subscribers who receive the two Swedish television channels through their cable company. The agency has recently been negotiating with Swedish Radio in an effort to secure a similar agreement. The Telecommunications Agency is in the process of becoming a substantial cable developer itself.

AFTENPOSTEN has learned that a letter has been sent from the Telecommunications Agency to the Transport Ministry in which the agency stated that the technical prerequisites for using unused satellite capacity to bring Swedish

television to several hundred thousand new viewers in Norway have been met. Such a nationwide solution will be temporary until the entire country is linked together in one cable network, but that is still a long way in the future.

Even though the technical requirements for transmitting television to cable subscribers over the entire country have been met the political authorities will probably have to take a stand on the issue within the framework of the broader media policy that will be discussed in an upcoming Storting report. The Nordsat satellite project may also come into consideration in this context.

#### Delay in Cable Network Expansion

After a half year's work things have already piled up for the Transport and Communications Ministry's Cable Network Inspectorate. This means that new cable companies have to wait a long time before they can put a shovel in the ground and provide people with satellite and local television, according to SUNNMORSPOSTEN.

"The regulations came at a somewhat premature stage," consultant Berit Ringstad of the Cable Network Inspectorate told the newspaper. Everyone who wants to expand or build new cable networks must ask the inspectorate for permission. This rule went into effect on 1 August of last year but the Cable Network Inspectorate was not working at full capacity until after New Year's. The staff is small, four case workers, a department leader and an engineer who works on model approval. In the future this staff will be working on big cases that will require a lot of work. The first one is the Janco network in Oslo.

"We must get a general idea of the present network before we can allow the company to expand the network," Ringstad told the newspaper.

She confirmed that work on the Janco case will take such a long time that cable companies in other parts of the country will have to wait. Berit Ringstad said that it is not possible to say anything concrete about how long it will take to deal with the Janco case, but it will probably take at least several months. After that Bergen and Kristiansand are among those waiting their turn.

Therefore the long time it takes to deal with cases will probably mean that Northwest Cable Company in Alesund will not get started on building a cable facility there before sometime in the fall.

"The public will not tolerate such long waiting periods while cases are dealt with. The Transport and Communications Ministry must hire more case workers or simplify the routine so that approval can be granted more quickly," said Jan-Ove Steffensen of Northwest Cable in a statement to the newspaper.

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NORWAY

POSTAL SERVICE SEEKING NEW COMPUTER NET CONTRACTOR

Oslo AFTENPOSTEN in Norwegian 13 Feb 85 p 34

[Article by Lars Ditlev Hansen]

[Text] The postal service is making a fresh effort to acquire a computer system with counter terminals in the 450 largest post offices after the original agreement with Norsk Philips, Inc. was canceled a year and a half ago following long delays. A request for bids went out recently to 15 contractors--including Philips--and the bids must be submitted by Friday.

"We hope we will have a proposal for a development contract ready in the first half of the year," said general director Bjorn Flage Pettersen. The project will be based on an advanced system with on-line connections to central data banks. It is anticipated that outside consultants and computer expertise will have to be used.

Under the agreement with Philips terminals were installed at six post offices on a trial basis. The project was not expanded later. Department engineer Johan Hisdal said at a press conference on Tuesday that the equipment covers present needs but not the needs the postal service anticipates in the future.

The postal service is not unfamiliar with computers--the Postal Savings Bank and the Postal Payment Service are big users. But the department really needs to upgrade the computer area in order to improve competitiveness in present services and offer new services, especially since the monopoly services provided by the postal system have shrunk to 30 percent. An overall plan is being worked out for using computers in the postal system. Economic director Johs. Haukland would not comment at the press conference on how much a system with counter terminals would cost or say anything about the expansion, but when the original agreement was reached with Philips in 1980 it was worth an estimated 130 million kroner.

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NORWAY

PAY TELEVISION FIRMS ANTICIPATE RECEIVING NORDIC, BENELUX PROGRAMS

Oslo AFTENPOSTEN in Norwegian 14 Feb 85 p 37

[Article by Ulf Peter Hellstrom]

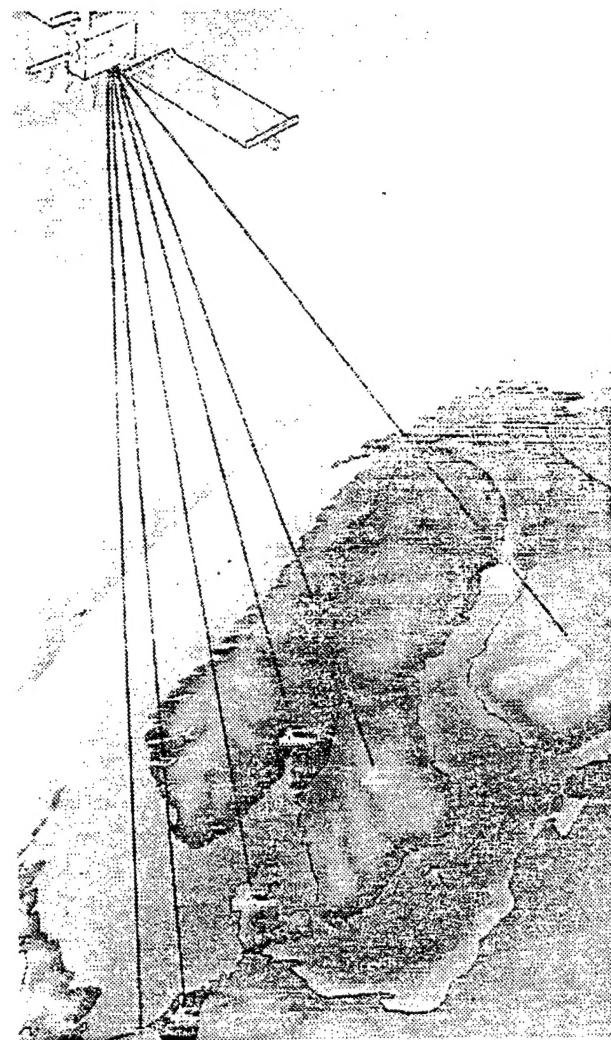
[Text] Pay TV will be offered over the entire country with 50,000-100,000 subscribers hooked up within a few years. That is the plan of Centralfilm, Inc. which is currently sending out orientation notices to Norwegian cable companies concerning a project that could be in operation as early as this fall. The condition is that the political authorities have to give their approval to pay TV. The Essele concern and the Nissen-Lie group are behind Centralfilm. The planned project will have no advertising and will provide Norwegian subtitles at a cost of around a hundred kroner a month. Investments in the Norwegian project could add up to 300-400 million kroner.

"For this kind of subscription television to be economically profitable there must be a cooperation that goes beyond the borders of this country. Centralfilm is working with FilmNet, which will be a kind of television channel sending programs via the ECS-1 [European Communications Satellite] satellite to interested cable companies in six countries," Ketil Nissen-Lie, chairman of the board of Centralfilm, told AFTENPOSTEN. The first program transmissions will start in the Netherlands as early as March and Swedish cable companies will follow suit in April. In Norway the plans are dependent on the political discussion of pay TV in the government and in Storting. If they give the green light interested cable companies could offer their subscribers this entertainment channel as early as this fall.

The Essele concern, which owns a stock majority in Centralfilm, is involved in the ownership of all the local companies that set up the FilmNet cooperation. This cooperative company has bought the Belgian state's rights to a transponder in the ECS-1 satellite. Plans call for sending the signals to the Netherlands, Belgium, Denmark, Sweden and Finland in addition to Norway, if this works out. Only in the Netherlands are cable companies big enough to provide financial backing for the project if public interest matches expectations.

The programs will mainly be feature films, television series, sports and other types of entertainment programs. Nissen-Lie stresses that the programs

will comply with Norwegian rules and standards when it comes to such things as violence and pornography.



Television programs will be transmitted via the ECS-1 satellite to cable company receiving stations in individual countries and will then be sent by cable network to the individual paying subscribers.

TV signals from the satellite will be sent to receiver stations owned by the cable companies. The signals will then be processed in such a way that Norwegian households get Norwegian subtitles. Each subscribing household will be equipped with a decoder that is now mass produced by Matsushita in Japan. The decoder, which is included in the rental fee, has the capacity to transmit up to six channels for pay TV and can be controlled from the central office of the cable company. Thus customers who have not paid for FilmNet can be shut off from a central location. This would eliminate the possibility of "pirate viewing."

Total investments for the entire FilmNet project in Norway could amount to around 300-400 million kroner. In Norway around 400,000 households are hooked up to a cable network or regional antenna facility. If experiences from the United States can be transferred to Western Europe and Norway, this means that an estimated 100,000 households might be interested in this kind of TV service. "The cooperation in FilmNet gives the advantages of a big operation while at the same time the technology makes it possible for individual cable companies to replace some of the programs offered with local television," Nissen-Lie said.

Does that put Centralfilm in direct competition with other companies, such as Janco Cable TV?

"Not really. The cable companies are primarily information carriers for companies that also provide the television programs approved by the politicians. There is a wealth of program packages around the world and Norwegian TV viewers are starving for good TV entertainment. The decoder provides room for several parallel program offerings. There should be room for more in this area," said Nissen-Lie.

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END